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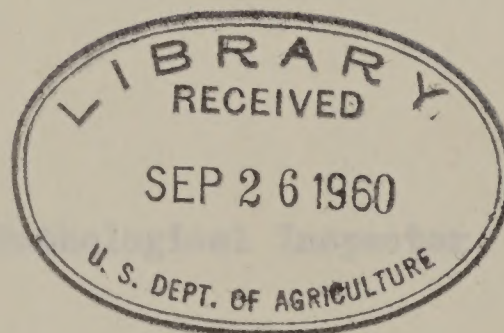
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BLISTER RUST CONTROL WORK

IN THE

EASTERN STATES

1938



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REPORT OF
COOPERATIVE BLISTER RUST CONTROL ACTIVITIES AND ACCOMPLISHMENTS
IN THE NORTHEASTERN STATES*
CALENDAR YEAR 1938
ALSO
PERIOD 1918- 1938, INCLUSIVE.

By

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Bureau of Entomology and Plant Quarantine
U. S. Department of Agriculture

* (New England, New York, Pennsylvania and New Jersey.)

REPORT OF

THE COMMISSIONER OF THE GENERAL LAND OFFICE

IN THE MATTER OF THE

LANDS OF THE

STATE

OF CALIFORNIA

IN THE MATTER OF THE

LANDS OF THE STATE OF CALIFORNIA

REPORT OF THE

COMMISSIONER OF THE GENERAL LAND OFFICE

IN THE MATTER OF THE

LANDS OF THE STATE OF CALIFORNIA

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COOPERATIVE BLISTER RUST CONTROL ACTIVITIES AND ACCOMPLISHMENTS
IN THE NORTHEASTERN STATES

This report is a detailed summary and analysis of blister rust control activities and accomplishments in the Northeastern States for all years and especially gives the pertinent facts regarding the 1938 work. The information is segregated by programs, each being complete in itself and divided into the various projects - Ribes eradication, nursery sanitation, Ribes nigrum elimination, pine and control area mapping, canker elimination and field studies. In addition, the results for all programs are summarized and the status of each project indicated. The report is based on the yearly statistical records submitted by the state leaders and general observations made by the Regional Leader. The results accomplished are due in a large degree to the loyalty, enthusiasm, initiative, and good judgment of the regular supervisory force which performed its work in an efficient and effective manner. No attempt has been made to discuss future plans, since they will be presented in separate statements as needed.

White Pine Conditions

Based on the cartographical survey of 1925, the white pine crop in the Northeastern States comprises 7,667,127 acres and has a normal commercial value of \$315,726,491 (Table 116). This acreage is classified as follows: Pure pine (80 percent or over), 2,808,179 acres; mixed pine (21-79 percent pine in mixture), 2,921,434 acres; and pine stocking and restocking in other types, 1,937,514 acres. Of this total acreage, 71.3 percent is located in the States of Maine, New Hampshire and New York. White pine is the most important tree in the extensive territory where it occurs in pure stands, or where it constitutes a high percentage of the trees in mixed types (See Page 7). In such situations it covers a larger area, is used for more purposes, and brings a greater return than any other species. For several years, the lumber cut of white pine in Maine and New Hampshire has been about 65 percent of the entire lumber cut in those two states. In many sections, white pine is being produced on a sustained yield basis, notably in Plymouth and northern Worcester Counties in Massachusetts and in southern Cheshire County, New Hampshire. These conditions exist today in spite of about 300 years of logging. The management of white pine as a permanent crop both on farm woodlots and on wild lands is essential to maintain the prosperity of the region.

The rate of growth of white pine on good sites out-ranks all other hard or soft-woods. In many instances, white pine constitutes a bank reserve for rural residents, especially farmers. Without any expenditure for cultivation, this tree has been the means of reducing or eliminating mortgages, educating children and often providing for old age independence. A high percentage of the wood-using industries in the Northeastern States use white pine in the manufacture of hundreds of commodities including boxes, toys, matches, pails and screen doors. It is also used for interior and exterior finish of homes. The use of knotty pine for interiors and pine slabbing for cabins is becoming more prevalent. The logging and manufacture of white pine provides employment for tens of thousands of persons. In spite of competition by substitute containers, the manufacture of wooden boxes continues at a fairly good volume, since many commodities require a more safe type of container than are offered by the wood substitutes.

The scenic, recreational and watershed protection value of white pine in the Northeastern States probably equals or exceeds its commercial worth. The region is becoming increasingly popular as a summer and winter playground, and its attractiveness in this respect is due in no small degree to the white pines which are green throughout the year. In the lake and lower mountain sections, white pine add greatly to attractiveness and popularity of the resort centers. The beauty of many scenic places is frequently due to the fascinating pine growth in some unusual situation.

White pine has been extensively planted for ornamental and reforestation purposes throughout the Northeastern States. During the period 1931 to 1938, inclusive, the state nurseries in this region distributed 79,520,370 white pines, 68.9% of these trees originating in the New York state nurseries. In Rhode Island, where there was no state nursery, during this period, 1,081,423 pines were purchased from out-of-state nurseries. Also, in the other Northeastern States many plantings were made from stock obtained from private nurseries.

Ribes Conditions

Wild Ribes occur more or less generally distributed throughout the white pine region of the Northeastern States, but vary locally as to site, species, size, and abundance. Nine indigenous species have been encountered in control work, four being gooseberries and five currants, exclusive of Ribes vulgare which is considered an escaped cultivated red currant. The number of Ribes varies from 100 or more per acre in some sites to few or none in others. The aggregate, however, represents many millions of such bushes, as evidenced by the eradication of 275,117,931 wild Ribes in the Northeastern States during the period 1918 to 1938, inclusive. It has been determined by Fivaz and others that shade is an important factor in eliminating and suppressing Ribes, that Ribes' seed remain dormant and viable in the duff for years, and that disturbance of the duff by logging, fire, animals, or mechanical means favors the germination of such dormant seeds. Therefore, Ribes are usually found most abundant in open situations, such as recently cut-over or burned areas, pastures, swamps, fence rows, etc. The cultivated Ribes problem is indicated by the 973,456 cultivated bushes that have been destroyed in applying control measures since 1918.

Pine Infection Conditions

Blister rust infection is general throughout the white pine range in New England and New York. Over extensive areas, from 1 to 20 percent or more of the pines are infected; and in many local pine tracts, from 50 to 100 percent of the trees are dead or dying. The amount of disease varies considerably in different localities and is directly influenced by such factors as the number of original infection centers caused by the planting of imported diseased pine, the distribution and amount of native pine, association of pine and Ribes, abundance of Ribes, climatic conditions, and the application of control measures. In Essex and Warren Counties, New York, and in the upper Connecticut River Valley region, where Ribes are generally abundant, pine infection is also heaviest; 11 to 20 percent or more of the trees being diseased. In southern New England and in most of southern New York, less than one percent of the pines are infected, except in a few limited areas.

Blister rust has existed in Pennsylvania and New Jersey for several years, but was not reported on native pines in the former state until 1927, and in the latter during 1934. The relatively slow spread of the disease prior to that time may be attributed chiefly to the fewer plantations of imported diseased stock and to the localization of native pine areas. Studies, made in unprotected areas in Pennsylvania during December, 1934 and January-February, 1935, show that the amount of disease is increasing at an alarming rate. Ten plots, comprising $9\frac{1}{4}$ acres, were laid out in the counties of Clarion and Potter. These plots contained 3,984 white pines, of which 2,618, or 66 percent, were infected with 10,605 cankers. The intensification of the disease is indicated by the fact that 62 percent of the cankers were of 1930 or 1931 origin. Fifty percent of the infected trees had trunk cankers and over 14 percent of the diseased pines had already been killed.

The scouting work in New Jersey during 1934 revealed 17 scattered infections on native pines in the township of Montague in the northwestern part of the state. A pre-eradication survey in the township of West Milford in Passaic County also showed several spot pine infections, the heaviest being on a property where *Ribes nigrum* had existed up to a few years ago.

During 1934, plot studies were made to determine the amount of blister rust infection on white pine in unprotected areas. A total of 45 plots, comprising 31.2 acres, were established in the States of New Hampshire, New York, Vermont, Maine, Massachusetts and Pennsylvania. These plots contained 17,569 white pine, 49.9 percent of which were infected with 22,238 cankers. Over 37 percent of these infections originated during the years 1930 and 1931, which shows the danger of delaying protection work.

An additional study was made in a 9-3/4 acre plot in an unprotected area in the township of Minot, Maine. Over 49 percent of the 5,262 pines were found to be infected. In this study only the age of the oldest canker on each infected tree was recorded, consequently there is no information available on the total number of cankers.

Similar plot studies were also made during the fall of 1937, W.P.A. laborers being used to assist the district blister rust control leaders in obtaining the pine infection data. In the unprotected tracts, studies were made in 88 plots, totalling 85 1/4 acres, in 61 townships in Maine, New Hampshire, Vermont, New York and Pennsylvania. A total of 68,829 white pines were examined and 14,132, or 20.5%, of the trees were found infected with 23,108 blister rust cankers. Over 54% of these cankers had originated after 1930.

General Summary of Blister Rust Control Accomplishments in the Northeastern States During the Period 1918 to 1937, Inclusive.

Ribes Eradication

The present total control area in the Northeastern States comprises 13,652,432 acres. Initial protection has been established on 74.3%, or 10,141,962 acres, by the eradication of 206,678,555 wild *Ribes* and 749,816 cultivated bushes. There still remains 3,510,470 acres in need of initial control work. Most of the unworked areas are located in New York, Maine, Vermont, New Hampshire and Pennsylvania. - (Table 99 - also map on page 131). Since 1922 a total of 3,383,592 acres has been re-examined for *Ribes*. This reworking resulted in the destruction of an additional 41,001,582 wild *Ribes* and 72,002 cultivated bushes on 24.8% of the total area initially protected. The acreage protected initially or re-examined under the various Emergency programs since 1933 represents 34.6 percent of the total area worked in this region during the period 1918 to 1938, inclusive.

The *Ribes* eradication work conducted under the Emergency programs since 1933 resulted in increasing the area protected by 4,957,585 acres, or 231.7%, more than what would have been accomplished if only regular money had been available. This conclusion is based on the following analysis. During 1932, the last year prior to

the advent of the Emergency programs and the decrease in the regular appropriation, \$94,604.62 regular money was expended for salaries and expenses of the state and district leaders in this region, and a total of 544,620 acres were cleared of Ribes. Since 1932, regular funds for cooperation with the states in this region have averaged only \$41,026.34 per year. During 1932-1938, if Emergency money had not been available, the regular allotment for cooperation with the states would probably not have exceeded \$50,000 per year. This would have necessitated a reduction in the district leader personnel and a corresponding decrease in the amount of control work performed, since under the regular program the acreage protected depends chiefly upon the success of the district leaders in securing local cooperation. Assuming that the decrease in the acreage protected would be comparable to the 47.1% decrease in regular funds from \$94,604.62 to \$50,000 per year, an average of only 288,104 acres per year would have been protected during the period, 1933-1938, inclusive. Actually, an average of 955,632 acres per year was cleared of Ribes in this region during the past six years. The Emergency programs have made possible the systematic working of large areas, rather than individual units. They have also permitted the application of control measures on lands where such work was urgent, rather than basing the selection on local cooperation. It has been possible to work many remote areas, also tracts containing an abundance of Ribes, where the cost of control had prevented prior application of protection measures. This control work has served to eliminate many sources of infection that otherwise would have persisted. Thousands of men have received training in Ribes eradication work, and many of these persons will be available for similar work in the future. The training should also enable many of these men to maintain control of blister rust on their own properties. The Emergency programs have not only resulted in the protection of hundreds of thousands of acres of valuable pine; but of even greater importance, they have helped to rehabilitate thousands of men who were on the verge of despair prior to the inauguration of such work.

Ribes Nigrum Elimination

Black currant elimination has been conducted as a special project in four states - New York, Rhode Island, Connecticut and Massachusetts; a total of 102,246 Ribes nigrum and 44,664 other cultivated bushes being destroyed (Table 107). In Rhode Island and Connecticut, the work has been completed; and in Massachusetts, it has been finished on the mainland. Out of a total of 996 townships in New York, the project has been completed in 225 and partially finished in 50 others - (Table 108). In conjunction with the regular control activities in the other Northeastern States, such bushes have been eradicated in the worked portions of the control areas. Few Ribes nigrum have been found in these latter states. In Rhode Island and New York practically all of the work was performed under the Regular program; but in Massachusetts and Connecticut, 19.7% and 89.5%, respectively, of the total man days on this project in each of these states represented labor provided by Emergency programs.

During 1937 and 1938, a check was made on the original black currant elimination work in 20 townships in Massachusetts for the purpose of locating any bushes that may have been missed or replanted since the initial survey. On the whole, the results of this follow-up showed that thorough inspections were made in the initial check, but it is apparent that there were lapses in the original work and that some locations were missed, some sprouting had taken place, and there has been occasional replanting. In the 20 towns involved, 34,489 locations were inspected and 132 patches of Ribes nigrum containing 610 bushes were recorded. A total of 498 other cultivated Ribes were also located in the control areas in the 20 towns checked.

Nursery Sanitation

At the close of the 1938 Ribes eradication season, 50 nurseries had established and were maintaining Ribes-free sanitation zones; 28 of these nurseries being privately owned, 17 belonging to the respective states, and 5 operated by the Soil Conservation Service - (Table 105). Twenty-eight other nurseries had established sanitation zones, but abandoned them prior to 1938. In the 37 nurseries worked during 1938, there existed at that time a total of 26,274,323 white pines.

Pine and Control Area Mapping

Pine and control area mapping has been performed in all the Northeastern States except New Jersey. Such activities were very limited prior to the advent of the Emergency programs for the reasons indicated under heading "Pine and Control Area Mapping" on page 31. Under the various control programs during 1933 to 1938, inclusive, 8,473,234 acres were mapped and 10,508,194 additional acres examined but not mapped due to lack of sufficient pine to justify the cost of control - (Table 111). A total of 12,012½ miles of control area boundary lines were also painted in the field. Nearly 97% of the acreage mapped in the Northeastern States during the period 1933-1938, inclusive, resulted from work performed under the various Emergency programs. Very little of this pre-eradication survey work could have been conducted if Emergency funds and labor had not been available. The pine and control area maps are not only of assistance to the crew foremen on Ribes eradication work, but will be helpful in planning and executing future re-examinations of control areas. The detailed mapping has been completed in 884 townships within the permanent pine production area and partly finished in 603 others. Spot mapping has also been completed in 431 additional townships and partly done in 183 other townships. There still remains 1,305 townships where no mapping has been done. As indicated in Table 112, detailed mapping has also been completed in 204 of the 1,774 townships outside the permanent pine production area and partly completed in 31 others. A small amount of spot mapping has also been performed in 127 additional townships. It is questionable whether the remaining townships outside the permanent pine production area, especially in Maine and Pennsylvania, should be mapped due to the inaccessibility of most of the areas in Maine, and the scattered distribution and small acreage of the white pine units in Pennsylvania.

Canker Elimination

Canker elimination work was performed during the period 1932 to 1938 principally on publicly-owned areas in five states - Maine, Vermont, Massachusetts, New York and Pennsylvania - (Table 109). The project in Maine was conducted chiefly at Acadia National Park, where the cankers were removed from infected scenic pines. Technical supervision was, however, given to a few small private jobs in Maine where the owners paid the entire cost of the labor. The projects in the four other states were principally in connection with the elimination of cankers from diseased pines in publicly-owned plantations where the percentage of diseased trees exceeded 10%. The canker elimination projects resulted in the examination of 7,248,046 white pines, 259,481 of which were cut down due to fatal stem cankers. An additional 541,731 pines were treated for infection by removing 859,462 branch cankers and 7,171 stem lesions. These accomplishments are due almost entirely to work performed under the Emergency programs since only 2.7 percent of the total man-days on this project are chargeable to the Regular program.

Field Studies

Many field studies have been made to determine the distribution and amount of infection on white pines, blister rust damage to such trees, spread of the disease from definite sources of Ribes, efficiency of Ribes eradication, improvements in control methods, and effectiveness of control. As a result of these studies, the following facts have been ascertained. Commercial protection of local white pine areas from blister rust by the eradication of Ribes within 900 feet is practical and effective. The width of the protection zone can be varied from 600 to 900 feet depending upon topography, species and abundance of Ribes, and density and height of the forest growth surrounding the pine area. Ribes nigrum are instrumental in the long distance spread and local establishment of the rust and should not be grown in pine regions. Blister rust is an insidious disease, the amount of infection and damage frequently being so inapparent to the layman as to cause a false sense of security. Blister rust on white pines is generally distributed throughout the region, the amount of infection depending upon the abundance, species and distribution of Ribes. Generally speaking, little new infection exists in protected areas, except those where the re-eradication work has been delayed too long. On the other hand, new infections are occurring in unprotected areas, being especially abundant in sections where Ribes are numerous, as in Pennsylvania. The disease kills white pines of all ages, and damage to merchantable-size trees is becoming increasingly conspicuous in northern New England and northeastern New York. Removal of branch and stem cankers from ornamental white pines is practicable, provided the trunks are not more than $2/3$ girdled by the fungus. Such action is not, however, advisable in wooded areas, except in connection with regular pruning operations in young stands or plantations and then it should be limited to removal of infected branches from trees which do not have stem cankers.

Relation of Cost of Control to Value of Pine





The cartographical survey of 1925 showed that there were 7,667,127 acres of white pine growth in the Northeastern States with a commercial value estimated at \$315,726,491. The cost of all control activities for all phases of the work by all cooperating agencies during the period 1918 to 1938, inclusive, amounted to \$11,026,898.45. State expenditures represent 20.3 percent of the total, those of local cooperators 9.7 percent, and the federal government 17.9 percent from regular funds and 52.1 percent from Emergency allotments. The total expenditure, however, represents only 3.5 percent of the commercial pine value. In the Northeastern States, the recreational, scenic and watershed protection value of the pine probably equals or exceeds the commercial value. Indirectly the educational and service work of the field personnel has been of great assistance in stimulating a general public interest in forestry, especially in the field of protection.

DISTRIBUTION AND ABUNDANCE OF WHITE PINE

NEW ENGLAND AND NEW YORK.

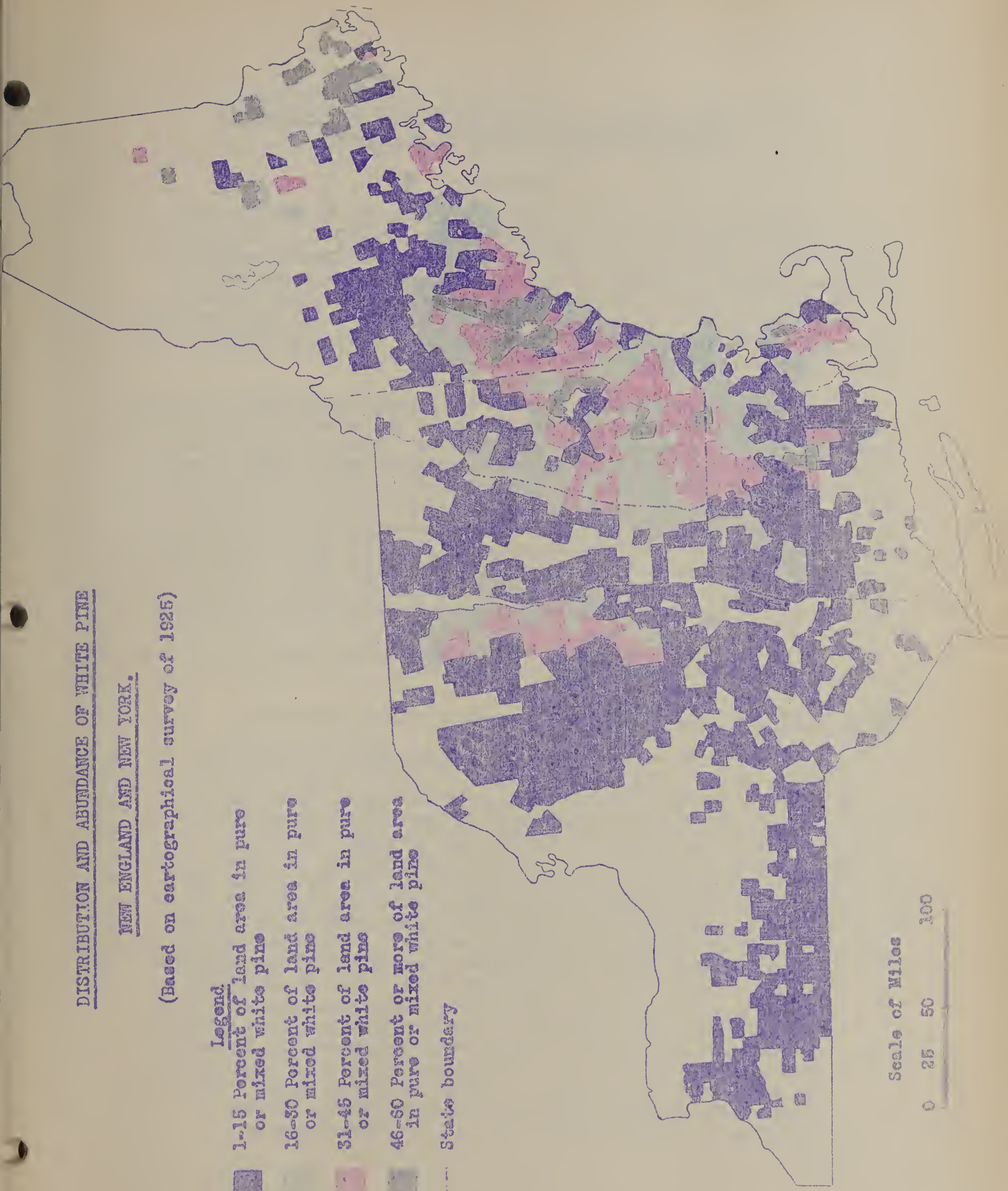
(Based on cartographical survey of 1925)

Legend.

-  1-15 Percent of land area in pure or mixed white pine
-  16-30 Percent of land area in pure or mixed white pine
-  31-45 Percent of land area in pure or mixed white pine
-  46-60 Percent or more of land area in pure or mixed white pine

--- State boundary

Scale of Miles



BLISTER RUST CONTROL ACTIVITIES UNDER REGULAR COOPERATIVE
CONTROL PROGRAM IN NORTHEASTERN STATES.

Policy

During the period 1918 to 1921, inclusive, the Federal Government cooperated with the states in experimental control work on a dollar for dollar basis. This work was conducted in each state under a cooperative agreement between the United States Department of Agriculture and the authorized state regulatory agency, the latter usually being the state forestry department. The control work was directed by the state officials under the general supervision of the Government, which paid a part of the Ribes eradication costs.

In 1922, a new program to secure the general application of control measures was inaugurated by the United States Department of Agriculture in cooperation with the state regulatory agencies. This program has been in operation since that time, but was altered during 1933 to 1938 to include the blister rust control work performed under the various Federal Emergency programs. The object of the regular cooperative work since 1922 has been to accomplish the control of the disease by providing pine owners with the expert advice, leadership, and supervision needed to secure prompt and effective local eradication of Ribes in the pine-growing regions. Prior to the advent of the Government Emergency work in 1933, all Federal cooperative expenditures were offset by state expenditures of at least equal amount.

Since 1936, responsibilities of the cooperating agencies have been as follows:

State Regulatory Agency (Usually the state forestry department)

(1) To furnish the services of a responsible state employee whose duties shall include nominal charge of the cooperative program and direction of the cooperative personnel in all matters concerned with carrying out any State laws and State policies with respect to blister rust control. (2) To cooperate with counties, townships, associations, and individuals in the local eradication of Ribes. (3) To provide such immediate supervision and checking of local eradication of Ribes as will maintain a standard of Ribes eradication satisfactory to the Bureau of Entomology and Plant Quarantine, and in so far as practicable to utilize the facilities of its organization for furthering the cooperative work. (4) To undertake directly or in cooperation with such State agencies as may have jurisdiction, such destruction of white pines and Ribes and such enforcement of State laws as may be necessary for the effective prosecution of blister rust control work, including regulation of the intrastate movement of blister rust host plants. (5) To furnish the necessary office space and facilities for the direction of the cooperative work at State headquarters.

The Bureau of Entomology and Plant Quarantine

(1) To furnish the services of a chief field leader who shall devote his entire time to the coordination and prosecution of the control activities of the cooperating agencies in accordance with working plans mutually agreed upon by the responsible representatives of the agencies concerned. (2) To furnish the services of such assistant field leaders as may be agreed upon from time to time in accordance with needs of the work and the availability of funds. (3) To provide these and any other cooperative employees with subject matter and technical information essential to the proper conduct of their work in controlling and preventing the spread of blister rust. (4) To enforce Federal regulations on the interstate movement of blister rust host plants.

In New England and New York, this program has been in successful operation since its adoption in 1922; but in Pennsylvania and New Jersey, the control activities were not organized on a similar basis until 1929. There were several reasons for restricting control activities outside New England and New York. The principal ones were the few introductions of diseased nursery stock from Europe, the relatively slow establishment and spread of the rust, the scattered distribution of the white pine, and passive public interest in forestry and lack of adequate state appropriations for control work. Hence, up to 1929, cooperative activities in the East outside New England and New York were limited to a small amount of scouting, nursery sanitation, eradication of new centers of infection, and to investigational and informational work. The natural spread of the disease during the past few years has greatly increased the infested area outside New England and New York. As a result, definite control programs have been adopted in Pennsylvania, New Jersey and other eastern states.

Since 1933, the regular cooperative control work has been necessarily curtailed due to the Emergency programs. The blister rust leaders have given complete supervision to all control activities conducted in their respective districts under the P.W.A., W.P.A., and regular cooperative programs. In addition, they have provided technical supervision for the control work performed under the C.C.C. and other Emergency programs. The number of district leaders in the cooperating states has not been uniform or constant. Generally speaking there has been a gradual curtailment. The regular blister rust control supervisory force employed in the Northeastern States during 1938, is shown in the following chart. As indicated, some of the employees worked part time. In New Hampshire, four district leaders spent only $3/4$ of their time on control work. The cost of these part-time men while on other special duties were paid from state money other than that allotted for the blister rust program.

DIVISION PLANT DISEASE CONTROL
S. B. Fracker - Chief - Washington D.C.
J. F. Martin - Asst. Chief " "

REGIONAL OFFICE - NORTHEASTERN STATES
E. C. Filler - Regional Leader - Cambridge, Mass.
K. K. Stimson - Adm. Asst. " "
REGULAR CONTROL PROGRAM WPA CONTROL PROGRAM

M. G. Calderara - Control Spec.
L. W. Hodgkins - " "
J. H. Davis - Temp. " "

D. B. Cheyne - Princ. Clerk
P. L. Rusden - Field Investigations

C.C.C. Program

Other Emerg. Programs

MAINE
W. O. Frost State Leader

NEW YORK
H. L. McIntyre State Leader

NEW HAMPSHIRE
L. E. Newman State Leader

MASSACHUSETTS
C. C. Perry State Leader

BELFAST
H. G. Bradbury District Leader

AUBURN
G. H. Kimball District Leader

WARRENSBURG
N. H. Harpp District Leader

SARATOGA SPRINGS
P. E. Barber District Leader

KEENE
F. J. Baker District Leader

CONCORD
T. J. King District Leader

SPRINGFIELD
R. E. Wheeler District Leader

NO. ABINGTON
E. M. Brockway District Leader

NORTH BRIDGTON
D. S. Curran District Leader

WATERVILLE
J. M. White District Leader

HYDE PARK
H. G. Strait District Leader

GLOVERSVILLE
J. W. Charlton District Leader

LEBANON
G. F. Richardson District Leader

NORTH CONWAY
S. H. Boomer District Leader

GR. BARRINGTON
G. S. Doore District Leader

WORCESTER
Wm. Clave District Leader

BOONVILLE
T. P. Wooschlagher District Leader

PERU
H. W. Holcomb District Leader

WOODSVILLE
T. L. Kane District Leader

SAND LAKE
H. J. McCasland District Leader

GOUVERNEUR
C. B. Kresge District Leader

VERMONT
S. D. Conner State Leader

CONNECTICUT
J. E. Riley State Leader

RHODE ISLAND
A. C. White State Leader (Acting)

PENNSYLVANIA
R. P. Fatzinger State Leader

RUTLAND
M. B. Mulholland District Leader

ST. JOHNSBURY
E. H. Palmer District Leader

Temporary Personnel Assigned as Needed
--

Temporary Personnel Assigned as Needed
--

TOWANDA
T. C. Williams District Leader

CLEARFIELD
P. H. Simmonds District Leader

BELLOWS FALLS
F. H. Rose District Leader

State Land Projects
2 State Agents

BROOKVILLE
M. J. DeBerti District Leader

Complete Supervision Technical

Has also directly supervised control activities in Rockingham County. * Part time employee

Informational and Service Activities

Successful informational and service activities by the district leaders are essential to secure the cooperation of individuals and towns in the application of control measures. The informational features are used to create general and favorable attention, interest and desire; while the service work is required to obtain general, prompt, and effective cooperation.

No satisfactory comparison can be made of the volume of the informational and service work performed in the different states since, as stated previously, the number of district leaders in the cooperating states has varied considerably. Table 4 indicates a general decrease in the use of informational features during the past few years. This is due to fewer agents being employed and to the fact that such activities have purposely not been emphasized as strongly as during the early years of the program. The control work has now reached a stage where the chief objective is to retain public interest in maintaining control and this can be accomplished with less informational work than was required during the early years of the program. On the other hand, such activities are still an important part of the program and must be continued in sufficient volume to maintain public interest and participation in the control work. Since 1933, the district leaders' activities in connection with the Emergency programs increased their supervisory duties and resulted in a curtailment of the informational and service work. Such activities were also limited in some of the states because local cooperation was not solicited due to economic conditions and the policy of conducting control work chiefly under the Emergency programs. In several of the states, the district leaders spent most of their time on mapping work during the winter months since 1933. The decrease in the amount of informational and service activities by the district leaders has to a large extent been offset by the intimate knowledge of blister rust control gained by several thousands of workers employed on Emergency programs since 1933. Nevertheless, too drastic decreases have occurred in these phases of our work during recent years, and action has been taken to correct this condition.

In addition to the informational and service work performed by the permanent district blister rust control leaders, some activities of this nature were conducted by the state leaders and temporary state assistants. Since these latter employees did not submit monthly summary reports of their own activities to the Cambridge Office, the results of their efforts in this respect are not included in this report.

Summaries of the informational and service work performed by the district blister rust control leaders during 1938 are given in Tables 1 and 2, while the accomplishments for the period 1923 to 1938, inclusive, are indicated in Tables 3 and 4.

Table 1. - Informational Activities Performed in Each of The Northeastern States During 1938 by The Permanent District Leaders

State	Meetings Addressed		Displays Placed	Items Published
	No.	Attendance		
Maine	-	-	5	-
N.H.	57	8,349	18	41
Vt.	9	300	22	1
Mass.	11	608	10	4
R.I.	6	916	9	1
N.Y.	34	1,732	47	54
Penna.	-	-	4	-
Totals	117	11,905	113	81

Table 2. - Service Activities Performed in Each of the Northeastern States During 1938 by the Permanent District Leaders

State	Initial Interviews	Follow-Up Calls	Personal Instruction In Field (No. Individuals)
Maine	291	170	258
N.H.	1,019	1,251	372
Vt.	449	294	257
Mass.	619	306	126
R.I.	88	39	20
N.Y.	1,019	528	621
Penna.	96	4	17
Totals	3,581	2,592	1,671

Table 3. - Summary, By States, of Informational and Service Activities Performed by Permanent and Temporary District Blister Rust Control Leaders in Northeastern States During Period 1923-1938, Inclusive.

Informational

State	Meetings Addressed (1)		Displays Placed (2)	Publications Distributed (3)	Mimeographed Articles Distributed (3)	Items Published	Posters and Signs Placed (3)
	No.	Attendance					
Maine	1302	30,741	1,020	65,652	4,846	577	18,802
N.H.	2813	153,109	1,914	183,853	64,465	3,743	19,837
Vt.	816	24,747	618	30,653	192	492	7,561
Mass.	928	33,048	823	150,907	2,445	2,068	3,116
R.I.	227	18,203	122	35,331	2,250	394	2,104
Conn.	78	2,633	141	12,156	91	641	569
N.Y.	1470	101,000	574	133,570	3,595	2,313	9,049
Penna.	1	40	14	-	-	4	-
Totals	7635	363,521	5,226	612,121	77,884	10,232	61,038

(1) Includes "Field Demonstration Meetings".

(2) Includes "Roadside Demonstrations".

(3) No record kept of this item after April, 1934.

In addition, during the period July 1 to December 31, 1922, the following general informational work was performed: 586 meetings addressed with an attendance of 30,895 persons, 374 displays placed, 35,067 publications distributed, 313 items published, and 2,500 posters and signs placed.

Service

State	Initial Interviews	Follow-Up Calls	Persons Instructed in Field
Maine	29,120	9,939	20,433
N.H.	30,866	28,050	18,962
Vt.	11,992	4,781	9,393
Mass.	32,791	12,213	12,095
R.I.	3,381	2,780	613
Conn.	4,076	3,033	1,533
N.Y.	26,254	19,480	17,996
Penna.	540	87	86
Totals	139,000	83,383	81,110

During the period July 1 to December 31, 1922, an additional 6,227 interviews and 1,924 follow-up calls were made, and 1,540 individuals received personal instructions in the field.

Data for Pennsylvania covers period July 1, 1935 to December 31, 1938 when three district leaders have been employed.

Table 4. Summary of Yearly Informational and Service Activities Performed by Permanent and Temporary Blister Rust Control Leaders in Northeastern States During Period 1923-1938, Inclusive.

Informational

Year	Meetings Addressed (1)		Displays Placed(2)	Publications Distributed(3)	Mimeographed Articles Distributed(3)	Items Published	Posters and Signs Placed (3)
	No.	Attendance					
1923	1556	38,091	532	51,308	-	1,203	6,499
1924	1499	51,121	647	55,698	-	1,269	9,553
1925	1045	48,434	680	68,818	-	1,294	8,894
1926	700	38,100	624	76,697	-	1,202	8,056
1927	615	37,336	647	88,840	-	1,219	7,041
1928	522	23,987	492	62,703	14,953	1,109	7,268
1929	274	25,627	358	52,332	23,155	769	4,388
1930	188	9,297	342	48,124	20,715	518	3,445
1931	125	8,692	190	36,068	9,165	372	2,922
1932	271	18,678	121	39,562	6,416	340	1,758
1933	276	12,866	81	27,691	3,435	333	1,129
1934	108	10,361	104	4,277	45	182	85
1935	158	14,692	98	-	-	155	-
1936	96	7,048	84	-	-	112	-
1937	89	7,286	63	-	-	74	-
1938	117	11,905	113	-	-	81	-
Totals	7635	363,521	5,226	612,121	77,884	10,232	61,038

(1) Includes "Field Demonstration Meetings."

(2) Includes "Roadside Demonstrations".

(3) No record kept of this item after April, 1934.

In addition, during the period July 1 to December 31, 1922, the following general informational work was performed: 586 meetings addressed with an attendance of 30,895 persons, 374 displays placed, 35,067 publications distributed, 313 items published, and 2,600 posters and signs placed.

Service

Year	Initial Interviews	Follow-Up Calls	Persons Instructed in Field
1923	14,724	6,555	4,274
1924	15,984	6,804	6,198
1925	13,819	7,380	11,169
1926	12,153	7,309	11,559
1927	13,120	8,228	13,102
1928	15,644	8,625	8,952
1929	9,013	6,503	6,741
1930	7,905	5,568	3,168
1931	6,789	5,440	2,070
1932	6,996	4,968	1,884
1933	4,788	3,744	1,818
1934	4,379	2,667	2,123
1935	4,483	3,405	2,253
1936	3,330	2,407	2,266
1937	3,292	2,168	1,864
1938	3,581	2,592	1,671
Totals	139,000	83,363	81,110

During the period July 1 to December 31, 1922, an additional 6,227 initial interviews and 1,924 follow-up calls were made and 1,540 individuals received personal instructions in the field.

Cooperation

The informational and service activities have resulted in excellent public participation in blister rust control as evidenced by local cooperators making available \$1,084,727.38 for such work up to and including 1938. However, only \$1,068,800.77 of this amount was actually expended, the balance reverting to the contributors. All of the local funds were used on the regular control program except \$49,286.40 which was spent in connection with Federal Emergency activities. During the period 1918 to 1938, inclusive, 42,181 individual cooperators expended \$486,655.62 and expenditures of \$562,532.12 and \$19,613.03, respectively, were made from 2,108 town allotments and 41 county subscriptions. The individual cooperators actually furnished labor, or its equivalent in money, to eradicate the Ribes on their properties. Thousands of additional owners permitted the destruction of 909,566 cultivated Ribes without compensation. In addition to the above direct cooperation, thousands of individuals gave general support or personal aid to the control program. State expenditures, other than local cooperation, amounted to \$2,240,629.67, of which \$213,614.92 was spent on Federal Emergency programs.

Public interest and participation in blister rust control has been continued in the Northeastern States in spite of the depression and Federal Emergency programs. In fact, town cooperation reached high peaks in 1930 and 1931. Naturally during recent years there has been a decided decrease in the amount of local cooperation. This may be attributed chiefly to the fact that because of financial conditions and availability of Emergency funds little effort was made to secure such assistance, except to transport WPA crews. Tentative reports show that at the annual town meetings during March 1939, 45 towns in Maine and 35 towns in New Hampshire appropriated \$7696.42 and \$9,150.00, respectively, for blister rust control. The total for Maine includes \$521.42 unexpended balance from 1938 appropriations which were made available for work during 1939. In 1932, during the worst year of the depression, individuals actually expended more money on Ribes eradication than during the preceding year. Expenditures by 5,130 individual owners during the past six years have amounted to \$32,216.77, even though no special efforts were made to secure such cooperation. Only three of the Northeastern States decreased state appropriations for control work during recent years. In New York, state funds were reduced from \$60,000 to \$51,500 in 1935, and substantial reductions occurred in New Hampshire and Massachusetts.

Individual cooperation in wild Ribes eradication has been solicited in all the Northeastern States, except New Jersey. However, such efforts have been restricted in New Hampshire where the work is performed chiefly in cooperation with towns, in Maine since 1930 for a similar reason, and in Rhode Island where, except during 1920, state funds have been used to pay the entire cost of the limited amount of regular control work.

Town cooperation in connection with the Regular control program has been obtained chiefly in New Hampshire, Maine, and Connecticut. However, some town funds have also been provided in Vermont and Massachusetts. In New Hampshire, 1,307 town appropriations, excluding those of 1939, have made available \$405,545.00 for control work. This amount represents nearly 75 percent of the total town money raised in New England since 1918. Many of the New Hampshire towns have consistently made yearly appropriations until their entire pine areas have been protected. In fact, initial control work

has been completed in 166 New Hampshire towns. The town money in New Hampshire and Connecticut is turned over to the respective states and expended with additional state funds to clear definite town blocks of Ribes, irrespective of property lines.

In Maine, town cooperation has been obtained since 1921; 662 town appropriations making available \$120,625.96 for regular control work excluding 1939. Up to 1931, this town money, except for a few thousand dollars, was used to employ town foremen who aided the individual owners in eradicating Ribes concentrations on their properties. A revised state policy was inaugurated in Maine in 1931 whereby the town funds were used to employ crews, as in New Hampshire, and the control areas were systematically worked irrespective of property lines, the state paying one-third of the costs of eradicating the Ribes. The 14 town appropriations in Vermont, totaling \$1,422.75, have been used chiefly to pay the excess labor cost of foremen working with individual owners; but in one instance, a part of the money was spent in eradicating the Ribes on a town forest. Town money was secured in Massachusetts only during 1920 and 1921, when four appropriations, totaling \$1,700 were made for control work in Berkshire County. The town contributions, other than appropriations, in the Northeastern States during 1935-1938 totaled \$34,818.27. Practically all of this amount was spent on the WPA Program chiefly for transportation.

5 - Local Cooperation in Blister Rust Control Work in Northeastern States

1938

State	Individual Cooperation				Town Cooperation				County Cooperation		
	No. Cooperators		Canker Elimination	Amount Spent By Individual Cooperators	No. Town		Amount Town Money		No. County Allotments	Amount County Funds Expended	
	Cult. Ribes Erad. Only	Wild & Cult. Ribes Erad.			Appropriations	Contributions	Appropriated	Contributed			Total Expended
Me.	-	2	2	1,027.52	31*	2	5,925.00*	350.00	6,593.39	-	-
N.H.	-	3	-	194.80	51	3	13,050.00	662.75	12,527.12	2	567.64
Vt.	-	1	1	664.28	-	5	-	1,971.98	1,971.98	-	-
Mass.	85	59	-	1,243.16	-	4	-	3,280.28	3,280.28	-	-
Conn.	-	2	-	247.85	-	3	-	3,455.00	3,455.00	-	-
N.Y.	-	18	-	1,342.07	-	-	-	-	-	3	9,308.40
Pa.	-	37	-	132.75	-	-	-	-	-	-	-
Totals	85	122	5	4,852.43	82	17	16,975.00	9,720.01	27,827.77	5	9,876.04

1922 - 1938

Me.	621	10,448	18	33,618.64	662	12	120,625.96	544.39	110,990.01	-	-
N.H.	-	547	-	39,706.95	1,145	18	379,510.00	1,344.00	376,945.96	5	1,654.14
Vt.	172	2,078	5	68,092.49	14	33	1,422.75	15,585.43	16,783.34	-	-
Mass.	10,468	10,803	-	92,653.25	-	24	-	12,223.35	12,223.35	-	-
R.I.	-	2	-	31.36	-	-	-	-	-	-	-
Conn.	195	295	-	8,801.54	25	9	14,346.75	4,721.00	18,832.89	-	-
N.Y.	-	5,847	1	159,329.24	-	-	-	-	-	36	17,958.89
Pa.	12	276	-	2,180.23	-	-	-	-	-	-	-
Totals	11,468	30,326	24	454,413.70	1,846	96	515,905.46	34,818.17	535,776.55	41	19,613.03

1918 - 1938

Me.	621	10,478	18	84,781.71	662	12	120,625.96	944.39	110,990.01	-	-
N.H.	-	689	-	47,804.51	1,307	18	405,545.00	1,344.00	402,003.31	5	1,654.14
Vt.	172	2,139	5	72,113.60	14	33	1,422.75	15,585.43	16,783.34	-	-
Mass.	10,468	10,914	-	98,637.35	4	24	1,700.00	12,223.35	13,922.57	-	-
R.I.	-	8	-	581.36	-	-	-	-	-	-	-
Conn.	195	297	-	9,201.54	25	9	14,346.75	4,721.00	18,832.89	-	-
N.Y.	-	5,883	1	171,355.32	-	-	-	-	-	36	17,958.89
Pa.	12	276	-	2,180.23	-	-	-	-	-	-	-
Totals	11,468	30,689	24	486,655.62	2,012	96	543,640.46	34,818.27	562,532.12	41	19,613.03

In addition, \$1500.00 was available from 9 town appropriations made in 1937, the funds not being expended that year.

Table 6. - Local Cooperation in Blister Rust Control Work in Northeastern States
1918-1938, Inclusive

Year	Individual Cooperation				Town Cooperation				County Cooperation		
	No. Cooperators		Amount Spent by Indiv. Cooperators	No. Town Appropriations	Contributions	Amount Town Money		Total Expended	No. County Allotments	Amount County Funds Expended	
	Cult. Ribes Erad. Only	Wild & Cult. Ribes Erad.				Appropriated	Contributed				
1918	-	19	\$ 4,188.63	43	-	7,200.00	-	5,029.11	-	-	-
1919	-	50	6,645.74	36	-	6,310.00	-	7,907.31	-	-	-
1920	-	162	8,498.78	51	-	8,675.00	-	7,992.09	-	-	-
1921	-	142	12,908.77	34	-	5,550.00	-	5,827.06	-	-	-
1922	-	971	28,035.13	58	-	20,598.29	-	18,448.62	-	-	-
1923	664	1,968	40,969.47	121	-	39,530.00	-	40,150.59	-	-	-
1924	1,714	3,050	44,622.07	151	-	48,429.25	-	48,898.50	-	-	-
1925	958	3,069	39,720.06	132	-	40,975.00	-	40,351.51	-	-	-
1926	741	3,283	44,254.88	125	-	40,425.00	-	41,223.95	-	-	-
1927	834	3,537	49,040.81	125	-	38,127.00	-	38,299.74	-	-	-
1928	991	3,390	54,667.68	143	-	41,117.00	-	39,038.73	-	-	-
1929	1,019	3,364	49,786.39	156	-	41,385.23	-	41,323.28	4	833.90	-
1930	971	2,419	32,999.65	186	-	48,143.50	-	46,880.12	3	1,112.10	-
1931	753	1,172	18,592.61	175	-	48,399.00	-	47,455.36	8	2,699.92	-
1932	313	1,488	19,509.18	81	-	19,217.09	-	19,575.96	6	1,252.88	-
1933	463	854	8,944.07	55	-	11,615.10	-	11,414.04	4	694.49	-
1934	1,331	774	8,687.68	13	-	4,574.00	-	4,573.93	5	881.35	-
1935	411	491	3,258.31	66	25	16,095.00	4,243.92	20,198.37	1	425.60	-
1936	20	301	1,306.20	84	31	17,150.00	14,128.57	22,023.68	2	937.00	-
1937	195	73	5,168.08	95	23	21,150.00	6,725.57	28,092.60	3	349.75	-
1938	85	122	4,852.43	82	17	18,975.00	9,720.01	27,827.77	5	9,876.04	-
Total	11,468	30,689	486,655.62	2,012	96	543,640.46	34,818.17	562,532.12	41	19,613.02	-

Results Accomplished in Blister Rust Control Under
Regular Cooperative Program in the Northeastern States.

Ribes Eradication

Experimental control work in New England and New York during the period 1918 to 1921, inclusive, resulted in 1,042,273 acres being cleared of 15,002,878 wild Ribes and 91,725 cultivated bushes at an average cost of 41 cents per acre. The cost per acre was reduced from 73 cents in 1918 to 24 cents in 1921. In the application of control measures under the Regular Cooperative Program since that time, an additional area of 8,540,713 acres in the Northeastern States was eradicated of 92,905,158 wild and 538,428 cultivated Ribes at a per acre cost of 23.0 cents. This acreage includes, however, 1,317,676 acres reworked since 1922 at a cost of 20.4 cents per acre. Therefore, under the Regular program up to 1938, inclusive, control of blister rust had been established on 8,065,310 acres (pine areas plus protection zones), and in connection with the maintenance of control, 15.8%, or 1,317,676 acres had been reworked. This combined work resulted in the destruction of 107,908,036 wild and 630,153 cultivated bushes.

The results since 1922 were dependent upon the amount of local cooperation secured by the district leaders and funds provided by the cooperating states. State scouts were used to determine the location and abundance of Ribes chiefly in those townships where local cooperation had been obtained. In sections where the bushes were few, they were destroyed by the state scouts; those portions containing a general distribution or abundance of Ribes were definitely indicated as requiring crew work. The cost of such crew work was paid by the local cooperators and the state, the latter usually furnishing foremen to direct the activities of the laborers provided by the local cooperators. The standard eradication crew used on the Regular program consisted of five laborers and a foreman. However, in the case of individual cooperation, the owner frequently was unable to provide a full-size crew; consequently, many jobs were worked with crews of smaller size. In those townships where local cooperation had not been solicited or obtained, only a limited amount of control work was performed prior to the advent of the Emergency programs.

The low cost per acre under the Regular program may be attributed to the following facts. The best qualified men available, other than owners' labor, could be selected for foremen and crew members and usually these men were experienced in control work. These workers spent eight hours per day in the field and were usually accustomed to woods work. A considerable portion of the control area was worked by experienced scouts rather than crews as was necessary under the Emergency programs. Also, many of the Ribes concentrations were not worked until the advent of the Emergency activities.

The results accomplished in Ribes eradication work under the Regular program in each of the Northeastern States are shown in Tables 7 to 12. All states, except Rhode Island, Connecticut and New Jersey performed control work under the Regular program in 1938. As indicated in Table 7, a total of 1,601,457 wild Ribes and 2,442 cultivated bushes were destroyed on the 86,504 acres examined as a result of 13,097 man days of labor. The total cost of this work was \$47,047.58, or 54.4 cents per acre. Of the total acreage worked, 48.6% was in New York, and 35.5% was in New Hampshire. The total acreage examined represents 11.7% of the total area worked in this Region during 1938.

No satisfactory comparison can be made between the results of the initial and re-eradication work (Tables 8 and 9) as the same areas are not involved. However, it will be noted that based on totals for all states only 40 percent as many Ribes were found per acre on the re-eradication work, and the man days and cost per acre were 36% and 35%, respectively less for the maintenance project. As indicated in Table 10, there has been a marked increase in the average cost per acre for the work during the past three years. This may be attributed chiefly to the relatively small acreage protected and to a greater abundance of Ribes in the areas worked.

Prior to 1934, no record was kept of man-days for the Ribes eradication work under the Regular program. In this report, the man-days data for the period 1918-1923, were compiled for each state by dividing the total cost of the Ribes eradication work by an arbitrary daily wage rate of \$3.20.

Table 7. - Summary of Ribes Eradication Work Performed Under Regular Cooperative Program in Northeastern States During 1938.

(Excludes nursery sanitation and cultivated black currant elimination)

State	Type of Erad.	Acreage		Ribes Pulled		Total Man Days	Total Cost			Per Acre			
		Total Worked	Pine Protected	Wild	Cult.		Local Coop.	State	W.P.A.	Total	Cost	Ribes	Man Days
Maine	Initial	3,520	1,266	148,510	230	883	2070.56	701.37	7.97	2,779.90	.790	42.2	.25
	Re-Erad.	6,234	2,970	133,375	89	1,279	2874.41	892.71	11.06	3,778.18	.606	21.4	.21
	Total	9,754	4,236	281,885	319	2,162	4944.97	1594.08	19.03	6,558.08	.672	28.9	.22
N.H.	Initial	5,631	3,309	206,775	-	1,174	2923.48	734.62	-	3,658.10	.650	36.7	.21
	Re-Erad.	25,083	15,601	322,481	102	3,450	9135.69	2303.50	-	11,442.19	.456	12.9	.14
	Total	30,714	18,910	529,256	102	4,624	12,059.17	3041.12	-	15,100.29	.492	17.2	.15
Vt.	Initial	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	367	42	19,395	12	122	443.80	52.00	-	475.80	1.30	52.8	.33
	Total	367	42	19,395	12	122	443.80	52.00	-	475.80	1.30	52.8	.33
Mass.	Initial	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	983	224	36,072	2	235	630.40	192.08	-	822.48	.837	36.7	.24
	Total	983	224	36,072	2	235	630.40	192.08	-	822.48	.837	36.7	.24
N.Y.	Initial	17,518	5,839	439,194	1,012	2,981	7836.50	4287.21	-	12,123.71	.692	25.1	.17
	Re-Erad.	24,507	8,169	184,609	129	1,861	2493.97	5671.07	-	8,165.04	.333	7.5	.08
	Total	42,025	14,008	623,803	1,141	4,842	10330.47	9958.28	-	20,288.75	.485	14.8	.12
Penna.	Initial	1,555	786	51,282	865	484	77.25	1713.38	-	1,790.63	1.15	52.3	.31
	Re-Erad.	1,106	130	29,764	-	628	-	2011.55	-	2,011.55	1.82	26.9	.57
	Total	2,661	916	81,046	865	1,112	77.25	3724.93	-	3,802.18	1.43	41.7	.42
Total	Initial	28,224	11,200	875,761	2,108	5,522	12,907.79	7436.58	7.97	20,352.34	.721	31.0	.20
	Re-Erad.	58,280	27,196	725,696	334	7,575	15,578.27	11,105.91	11.06	26,695.24	.458	12.5	.13
	Total	86,504	38,396	1,601,457	2,442	13,097	28,486.06	18,542.49	19.03	47,047.58	.544	18.5	.15

Basis of costs: Includes actual cost or value of owners' labor usually figured at 40 cents per hour, actual cost of other laborers, scouts and crew foremen while engaged in locating and pulling Ribes - cost of crew transportation - and miscellaneous expenses for trail paper, picks, etc.

Table 8. - Initial Ribes Eradication Work Performed Under Regular Cooperative Program in Northeastern States During Period 1918-1938, Inclusive

(Excludes nursery sanitation and cultivated black currant elimination)

State	Total Acreage Worked	Ribes Pulled		Total Man Days	Total Cost	Per Acre		
		Wild	Cult.			Cost	Ribes	Man Days
Maine	1,754,098	20,283,454	118,824	76,482	\$244,598.24	.140	11.6	.04
N.H.	2,774,922	38,657,411	141,642	184,895	592,777.74	.214	13.9	.07
Vt.	192,187	2,140,052	10,286	26,327	84,271.80	.438	11.1	.14
Mass.	1,784,247	13,043,707	238,526	87,087	278,890.58	.156	7.3	.05
R.I.	273,179	190,069	12,281	9,428	30,165.64	.110	0.7	.03
Conn.	229,550	1,611,118	18,576	16,754	53,610.65	.234	7.0	.07
N.Y.	989,546	20,532,988	60,554	232,529	755,134.36	.763	20.7	.23
Penna.	67,581	3,858,271	6,364	11,308	36,594.07	.541	57.1	.17
Totals	8,065,310	100,317,050	607,053	644,760	2,076,043.08	.257	12.4	.08

Note: Acreage in Maine adjusted by deducting 1,017,911 acres which represents eliminated area that was included in acreage figures reported for years 1921-1930, inclusive, when the control work was performed by the owner-labor and scouting basis. These areas were non-pine land outside the control area.

Basis of costs: - See Page 20.

Table 9. - Ribes Re-Eradication Work Performed Under Regular Cooperative Program in Northeastern States During Period 1918-1938, Inclusive.

(Excludes nursery sanitation and cultivated black currant elimination)

State	Total Acreage Re-examined	Ribes Pulled		Total Man Days	Total Cost	Per Acre		
		Wild	Cult.			Cost	Ribes	Man Days
Maine	86,629	1,185,674	2,005	8,745	\$27,542.60	.318	13.7	.10
N.H.	465,707	3,214,384	3,765	26,111	85,222.81	.183	6.9	.06
Vt.	33,019	179,088	845	3,462	11,160.56	.338	5.4	.10
Mass.	477,074	896,060	9,414	14,862	50,045.32	.105	1.9	.03
R.I.	16,865	10,408	75	648	2,072.71	.123	0.6	.04
Conn.	36,161	448,593	3,708	6,939	22,654.93	.627	12.4	.19
N.Y.	190,499	1,142,580	3,265	16,276	58,670.90	.308	6.0	.09
Penna.	11,702	514,200	25	3,369	10,959.23	.937	43.9	.29
Totals	1,317,676	7,590,986	23,100	80,410	268,329.06	.204	5.8	.03

Basis of costs: See Page 20.

Table 10 - Summary of Initial and Re-Eradication Work Performed Under Regular Cooperative Program in Northeastern States During Period 1918-1938, Inclusive.
(Excludes nursery sanitation and cultivated black currant elimination)

Year	Total Acreage Worked	Ribes Pulled		Total Man Days	Total Cost	Per Acre		
		Wild	Cult.			Cost	Ribes	Man Days
1918	137,458	2,413,887	22,150	31,207	\$ 99,863.40	.727	17.6	.23
1919	252,043	4,549,948	27,877	43,595	139,500.56	.553	18.1	.17
1920	270,318	4,301,940	25,936	29,271	93,662.74	.348	15.9	.11
1921	382,454	3,737,103	15,762	29,027	92,885.96	.243	9.8	.08
1922	475,217	4,849,812	16,061	30,257	96,818.65	.204	10.2	.06
1923	892,639	7,969,917	55,074	50,277	160,883.87	.180	8.9	.06
1924	1,012,986	9,527,787	73,858	53,102	169,927.90	.168	9.4	.05
1925	834,894	7,346,239	59,458	43,376	138,802.49	.166	8.8	.05
1926	815,187	8,858,071	51,471	46,417	148,537.83	.182	10.9	.06
1927	899,852	8,046,826	49,745	48,631	155,618.50	.173	8.9	.05
1928	883,712	6,680,001	60,661	50,421	161,347.40	.183	7.6	.06
1929	932,787	7,666,890	76,450	55,951	179,043.04	.192	8.2	.06
1930	712,229	8,186,105	30,962	49,895	159,665.95	.224	11.5	.07
1931	578,291	7,174,121	21,978	49,950	159,839.84	.276	12.4	.09
1932	544,620	4,786,326	25,091	39,057	124,983.41	.229	8.8	.07
1933	285,514	3,845,543	7,340	23,231	74,341.79	.262	13.6	.08
1934	147,194	2,144,445	2,690	12,286	46,310.80	.315	14.6	.08
1935	140,406	1,573,170	2,536	10,368	39,787.74	.283	11.2	.07
1936	34,999	928,695	889	4,519	14,174.64	.406	26.5	.13
1937	83,598	1,721,703	2,022	11,236	41,328.00	.494	20.6	.13
1918-37*	9,296,482	108,308,579	627,711	712,073	2,297,324.56	.247	11.4	.08
1938	86,504	1,601,457	2,442	13,097	47,047.58	.544	18.5	.15
Totals	9,382,986	107,908,036	630,153	725,170	2,344,372.14	.250	11.5	.08

*Sub-totals for 1918-1937, inclusive, include adjusted total acreage - see Page 21 for explanation.

Basis of costs: - See Page 20.

Table 11-Recapitulation of Total Costs of Ribes Eradication Work Under Regular Cooperative Program in Northeastern States During Period 1918-1938, Inclusive.

Year	Individuals	Towns	State	Gov't.	Counties	Total
1918	\$ 4,188.63	\$ 5,029.11	\$ 36,970.29	\$ 53,675.37	-	\$ 99,863.40
1919	6,645.74	7,907.31	45,871.84	79,075.87	-	139,500.56
1920	8,498.78	7,992.09	18,403.73	58,768.14	-	93,662.74
1921	12,908.77	6,827.06	38,886.52	35,263.61	-	92,885.96
1922	28,035.13	16,898.68	48,683.94	3,200.90	-	96,818.65
1923	40,969.47	40,150.59	76,951.28	2,812.53	-	160,883.87
1924	44,622.07	48,898.50	71,804.15	4,603.18	-	169,927.90
1925	39,720.06	40,351.31	56,251.26	2,479.86	-	138,802.49
1926	44,172.88	41,223.95	60,304.66	2,836.34	-	148,537.83
1927	49,040.81	38,299.74	64,765.56	3,512.44	-	155,618.56
1928	54,667.68	39,038.73	64,329.47	3,311.52	-	161,347.40
1929	49,786.39	41,323.28	82,972.66	4,127.81	833.90	179,043.04
1930	31,130.24	46,880.12	72,270.65	8,272.84	1,112.10	159,665.95
1931	17,746.57	47,455.36	85,896.02	6,041.97	2,699.92	159,839.84
1932	18,113.90	19,568.23	78,448.22	7,600.13	1,252.88	124,983.41
1933	8,472.67	11,145.59	52,728.27	1,300.77	694.49	74,341.79
1934	3,833.98	2,649.93	38,945.54	-	881.35	46,310.80
1935	2,436.06	15,954.45	20,971.63	-	425.60	39,787.74
1936	107.60	7,895.01	6,172.03	-	-	14,174.64
1937	3,875.68	20,275.87	16,360.15	82.05	734.25	41,328.00
1938	2,872.32	16,625.34	18,542.49	19.03	8,988.40	47,047.58
Totals	471,844.43	521,390.25	1,056,550.16	276,984.41	17,622.89	2,344,372.14

AMOUNT OF COOPERATIVE FUNDS EXPENDED EACH YEAR FOR RIBES ERADICATION WORK
ON REGULAR BLISTER RUST CONTROL PROGRAM IN NORTHEASTERN STATES
1918 to 1938, INCLUSIVE

Thousands
 Of Dollars
 200

Accumulative Amount of Cooperative Money Expended

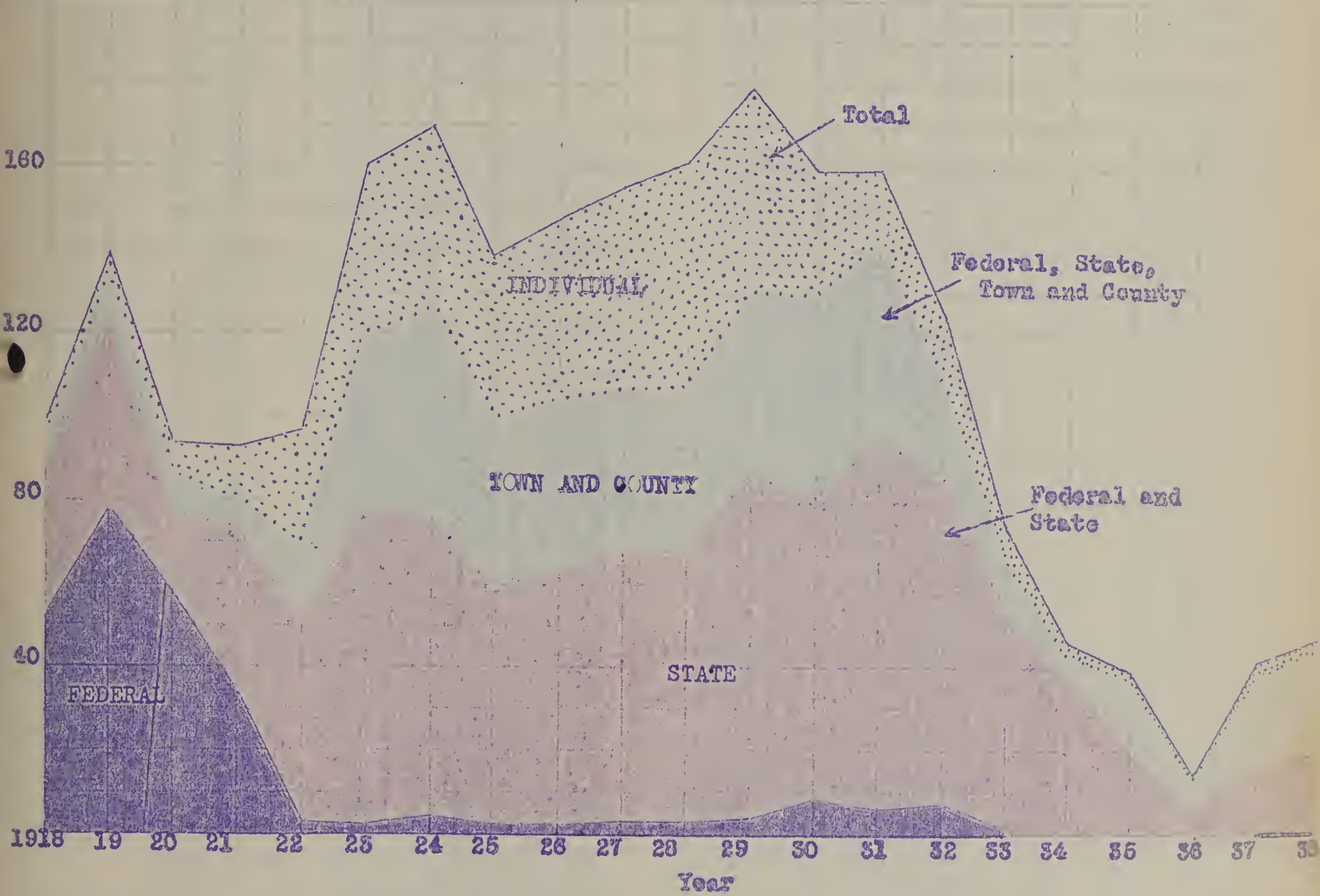


Table 12. - Initial and Re-Eradication Work Performed Under Regular Cooperative Program in Each of The Northeastern States

(Excludes nursery sanitation and cultivated black currant elimination)

1922-1938, Inclusive.

State	Total Acreage Worked	Ribes Pulled		Total Man Days	Cost			Per Acre				
		Wild	Cult.		Individual	Towns & Counties	State	Gov't.	Total	Cost	Ribes	Man Days
Maine	1,660,097	20,810,399	119,250	79,018	81,292.05	106,597.36	29,478.40	55,064.89	252,432.70	.152	12.5	.05
N.H.	2,669,724	35,536,105	85,890	173,149	39,534.67	374,771.52	141,006.57	1,547.25	556,860.01	.209	13.3	.06
Vt.	207,228	2,046,995	10,849	26,335	67,715.06	1,077.91	11,513.17	1,073.71	81,179.85	.392	9.9	.12
Mass.	2,179,444	11,524,894	237,595	87,988	85,733.19	-	199,185.01	1,342.80	284,261.00	.130	5.3	.04
R.I.	186,803	119,233	8,105	4,836	31.36	-	13,612.64	1,832.80	15,476.80	.083	0.6	.03
Conn.	252,241	1,934,451	22,274	21,392	7,146.03	12,187.89	42,327.15	7,242.35	68,903.47	.273	7.7	.08
N.Y.	1,105,893	16,560,610	50,076	185,675	158,700.82	17,622.89*	435,453.64	15.00	611,792.35	.553	15.0	.17
Penna.	79,283	4,372,471	6,389	14,677	1,449.26	-	44,021.40	2,082.62	47,553.30	.600	55.2	.19
Totals	8,340,713	92,905,158	538,428	592,070	439,602.51	512,257.57	916,597.93	50,201.42	1,918,459.48	.230	11.1	.07

1918-1938, Inclusive

Maine	1,840,727	21,469,128	120,829	85,177	82,455.12	106,597.36	35,534.23	47,554.15	272,140.84	.148	11.7	.05
N.H.	3,240,629	41,871,795	145,407	211,006	47,632.23	399,827.87	169,603.20	60,932.25	678,000.55	.209	12.9	.07
Vt.	225,206	2,319,138	11,131	29,789	71,736.17	1,077.91	16,471.13	6,147.15	95,432.36	.424	10.3	.13
Mass.	2,261,321	13,939,767	247,940	101,949	89,717.29	1,699.22	214,349.41	23,169.98	328,935.90	.145	6.2	.05
R.I.	290,064	200,475	12,356	10,074	581.36	-	21,064.21	10,592.78	32,238.35	.111	0.7	.04
Conn.	265,711	2,059,714	22,282	23,693	7,546.08	12,187.89	46,940.17	9,591.44	76,265.58	.287	7.8	.09
N.Y.	1,180,045	21,675,548	63,819	248,805	170,726.90	17,622.89*	508,541.41	116,914.06	813,805.26	.690	18.4	.21
Penna.	79,283	4,372,471	6,389	14,677	1,449.28	-	44,021.40	2,082.62	47,553.30	.600	55.2	.19
Totals	9,382,936	107,908,036	630,153	725,170	471,844.43	539,013.14	1,056,530.16	276,984.41	2,344,372.14	.250	11.5	.08

* County funds.

Basis of costs: See Page 20.

Acreage in Maine adjusted by deducting 1,017,911 acres from total reported prior to 1938. This reduction represents eliminated area that was included in acreage figures for years 1921 to 1930, inclusive, when control work was performed by owner-labor and scouting basis. These eliminated areas were non-pine land outside the control area.

Federal Projects on Government Lands - Regular Cooperative Program

Control measures under the Regular program have been applied on the white pine areas of the National Forests and Parks in the Northeastern States where the pine is of sufficient value to justify the cost of protection. Up to 1933, such work was conducted as a regular federal project, the Bureau of Plant Industry cooperating with the National Forest and Park Services. With the exception of a small project on the Allegheny National Forest, all control work on Government owned lands in the Northeastern States since 1933 has been performed under the C.C.C. Program.

The project at Acadia National Park in Maine was begun in 1929 and has been continued each succeeding year, except during 1938. All control work at this Park during 1933-1937 was performed by crews from the two local C.C.C. camps. The initial control project is practically completed and about 1/3 of the area has been reworked.

With the exception of recent acquisitions, all white pine areas on the White Mountain National Forest have been given initial protection. The work was conducted as a regular federal project during the period 1924-1931, inclusive; while since 1933, only C.C.C. personnel has been used.

On the Allegheny National Forest in Pennsylvania, the Hearts Content tract was initially cleared of Ribes in 1929. The entire control area of 461 acres was reexamined for Ribes in 1931, and the most likely Ribes sites, totalling 166 acres, were reworked again in 1933. During 1932, an area of 135 acres known as the Hazelwood Oil Company tract was given initial protection, while in 1933 two additional pine areas at Kelly Pines and Sandstone Springs Camp sites were initially cleared of Ribes. During the period 1933 to 1936, all control work on this forest has been performed by C.C.C. crews. No protection work has been done since that time. Control has been maintained by reworking early protection areas, however there still remains 1,586 acres in need of initial protection. It is expected that a part of this acreage will be worked during 1939.

Table 13 - Summary of Ribes Eradication Work on Federal Lands in Connection With Regular Cooperative Program, 1924-1933, Inclusive.

(Data included in preceding summaries of control work under Regular Cooperative Program)

Project	Type of Erad.	Acreage Examined	Ribes Pulled		Cost					Per Acre	
			Wild	Cult.	B.P.I.	State	Forest Service	Park Service	Total	Cost	Ribes
Acadia National Park, Me.	All Initial	7,726	503,920	-	3145.85	-	-	8345.53	11,491.36	\$1.49	65.2
White Mt. National Forest, N.H.	All Initial	6,779	182,493	-	75.63	224.11	1471.62	-	1,771.36	.261	25.6
Allegheny National Forest, Pa.	Initial	891	129,019	8	136.56	-	507.71	-	644.27	.723	144.6
	Re-Erad.	627	19,993	-	71.29	-	272.06	-	343.35	.548	31.8
	Total	1,518	149,012	8	207.85	-	779.77	-	987.62	.651	98.2
Totals	Initial	15,396	815,432	8	3358.02	224.11	1979.33	8345.53	13,903.99	.903	63.0
	Re-Erad.	627	19,993	-	71.29	-	272.06	-	343.35	.548	31.8
	Total	16,023	835,425	8	3429.31	224.11	2251.39	8345.53	14,250.34	.889	62.1

Basis of costs:- Includes actual cost of laborers, scouts, and foremen engaged in locating and pulling Ribes; cost of crew transportation; and miscellaneous expenses for trail paper, picks, etc.

The control work performed on federal lands under the C.C.C. Program during the period 1933-1938, inclusive, is summarized in Table 29, and the results for all work on such areas under the Regular and C.C.C. Programs are given in Table 97.

Nursery Sanitation - Regular Cooperative Program

White pines must be grown under absolutely sanitary conditions, as regards Ribes, in order to prevent infection from blister rust. Therefore, it is essential that the white pine stock in each nursery be protected by eradicating all Ribes within 1500 feet and all European black currants from within one mile. All of the Northeastern States, except Rhode Island, have state nurseries growing white pines. Control of the disease has been established and is being maintained in all 17 of these nurseries and 5 federal nurseries in this Region. Most of the commercial pine growing nurseries are located in Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania. In the other Northeastern States there are only a few such nurseries producing white pines. Sanitation zones have been established around most of the important commercial nurseries in New England. Control work around the private nurseries in New York has been limited due to the relatively few white pines grown and the abundance of cultivated Ribes within the prescribed sanitation zones which would necessitate a large expenditure by the nurserymen for compensation if these bushes were removed. According to the present state blister rust law in New York, effective February 17, 1930, no compensation shall be paid by the state for any species of Ribes destroyed in connection with the establishment of Ribes-free zones around commercial nurseries, but fair compensation must be paid for such bushes by the person owning or operating the protected nursery. None of the commercial nurseries growing white pine in New Jersey has established sanitation zones. In Pennsylvania four commercial nurseries have taken such action. However, in both states an effort is being made to extend protection to the most important of the commercial nurseries. The status of nursery sanitation work in the various Northeastern States as of December 31, 1938, is indicated in Table 105.

Since 1929, a separate record has been kept of the Ribes eradication work performed in the protection of white pine in the nurseries. Prior to 1930, the results of such activities were included in the regular Ribes eradication summaries.

During 1938, nursery sanitation work was performed under the Regular Cooperative Program in Massachusetts, Connecticut, New Hampshire and Pennsylvania, where the environs of 20 nurseries were re-examined for Ribes. The results of the 1938 sanitation work, by states, are shown in Table 14, while Tables 15 and 16 give the totals for the period 1930-1938, inclusive, by states and years, respectively. A marked decrease in the number of Ribes per acre is apparent in the re-eradication projects. In fact, during this period an average of only 1.4 bushes per acre was found.

Table 14 - Summary of Nursery Sanitation Work Under Regular Cooperative Program in Northeastern States During 1938.
(All Re-Eradication Work)

State	No. Nurseries Worked	Acreage Worked	Ribes Pulled		Total Man Days	Total Cost (All paid by state)	Per Acre		
			Wild	Cult.			Cost	Ribes	Man Days
N.H.	1	499	1	-	4	\$ 14.00	.028	.002	.008
Mass.	2	1,726	5611	-	42	170.98	.099	3.3	.02
Conn.	11	3,609	134	-	55	357.20	.099	0.04	.02
Penna.	6	2,697	253	9	126	541.60	.209	0.1	.06
Totals	20	8,430	5999	9	267	1,083.78	.129	0.7	.03

Basis of costs: Includes cost of laborers, scouts and foremen while engaged in locating and eradicating Ribes in nursery sanitation zones (labor furnished by owners usually charged at rate of 40 cents per hour) - cost of crew transportation.

Table 15 - Summary of Nursery Sanitation Work Under Regular Cooperative Program
in Northeastern States, 1930-1938, Inclusive.

By States

State	Type of Erad.	Acreage Examined	Ribes Pulled		Total Man Days	Cost				Per Acre			
			Wild	Cult.		Indiv.	Towns	State	B.P.I.	Total	Cost	Ribes	Man Days
Maine	Initial	206	103,516	22	163	324.45	-	198.20	-	522.65	2.54	502.5	.79
	Re-Erad.	272	8,873	-	74	-	156.18	82.27	-	238.45	.877	32.6	.27
	Total	478	112,389	22	237	324.45	156.18	280.47	-	761.10	1.59	235.1	.50
N.H.	Initial	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	1,826	7,648	-	148	172.28	-	322.71	-	494.99	.271	4.2	.08
	Total	1,826	7,648	-	148	172.28	-	322.71	-	494.99	.271	4.2	.08
Vt.	Initial	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	1,150	3,082	-	160	-	-	516.01	-	516.01	.449	2.7	.14
	Total	1,150	3,082	-	160	-	-	516.01	-	516.01	.449	2.7	.14
Mass.	Initial	682	7,567	112	85	110.05	-	212.79	10.00	532.84	.488	11.1	.13
	Re-Erad.	5,539	8,649	179	664	89.20	-	2,681.69	-	2,770.89	.500	1.6	.12
	Total	6,221	16,216	291	749	199.25	-	2,894.48	10.00	3,103.73	.499	2.6	.12
R.I.	Initial	1,190	133	520	158	-	-	343.55	162.87	506.43	.426	0.1	.13
	Re-Erad.	4,553	4,522	165	110	-	-	749.62	-	749.62	.164	1.0	.02
	Total	5,753	4,755	685	268	-	-	1,093.18	162.87	1,256.05	.218	0.8	.05
Conn.	Initial	6,587	5,352	102	215	204.32	-	345.69	139.92	689.93	.105	0.8	.03
	Re-Erad.	58,160	5,989	864	1,192	557.04	-	3,267.64	610.87	4,435.55	.116	0.2	.03
	Total	44,747	11,341	966	1,407	761.36	-	3,613.33	750.79	5,125.48	.115	0.3	.03
N.Y.	Initial	3,110	26,017	634	382	5.60	-	1,219.95	-	1,225.55	.394	8.4	.12
	Re-Erad.	59,172	95,678	1155	3,812	246.57	-	12,349.63	-	12,596.20	.213	1.6	.06
	Total	62,282	121,695	1790	4,194	252.17	-	13,569.58	-	13,821.75	.222	2.0	.07
N.J.	Initial	600	462	49	7	-	-	22.20	-	22.20	.032	0.8	.01
	Re-Erad.	610	569	-	8	-	-	31.47	22.50	53.97	.088	0.9	.01
	Total	1,210	1,031	49	15	-	-	53.67	22.50	76.17	.063	0.9	.01
Penn.	Initial	4,115	35,920	491	261½	255.30	-	588.43	36.80	860.53	.209	8.7	.06
	Re-Erad.	8,716	28,153	43	1,087	37.15	-	3,223.41	-	3,260.56	.374	3.2	.12
	Total	12,831	64,073	534	1,548½	272.45	-	3,811.84	36.80	4,121.09	.321	5.0	.11
Totals	Initial	16,490	178,967	1930	1,271½	879.72	-	2,930.82	349.59	4,160.13	.252	10.9	.08
	Re-Erad.	120,008	163,263	2407	7,255	1,102.24	156.18	23,224.45	633.37	25,116.24	.209	1.4	.06
	Total	136,498	342,230	4337	8,526½	1,981.96	156.18	26,155.27	962.96	29,276.37	.214	2.5	.06

Basis of costs: See Page 26.

Table 16 - Summary of Nursery Sanitation Work Under Regular Cooperative Program
in Northeastern States, 1930-1938, Inclusive.

By Years

Year	Type of Erad.	Acreage Examined	Ribes Pulled		Total Man Days	Cost				Per Acre			
			Wild	Cult.		Indiv.	Towns	State	B.P.I.	Total	Cost	Ribes	Man Days
1930	Initial	4,973	110,704	182	447	528.77	-	905.19	-	1,433.96	.288	22.3	.09
	Re-Erad.	20,752	59,542	643	1,490	558.89	-	4,198.33	-	4,767.22	.230	2.9	.07
	Total	25,725	170,246	825	1,937	1097.66	-	5,103.52	-	6,201.18	.241	6.6	.08
1931	Initial	3,048	6,117	55	120	5.60	-	240.36	139.92	385.88	.127	2.0	.04
	Re-Erad.	26,776	26,126	1086	1,671	117.69	-	4,863.42	372.50	5,353.61	.200	1.0	.06
	Total	29,824	32,243	1141	1,791	123.29	-	5,103.78	512.42	5,739.49	.192	1.1	.06
1932	Initial	4,759	16,478	1222	565	50.65	-	1,588.32	172.87	1,811.84	.381	3.5	.11
	Re-Erad.	12,903	12,543	60	1,247	155.51	7.73	3,828.15	5.33	3,996.72	.310	1.0	.10
	Total	17,662	29,021	1282	1,812	206.16	7.73	5,416.47	178.20	5,808.56	.329	1.6	.10
1933	Initial	1,490	19,102	32	67	59.40	-	196.95	36.80	293.15	.197	12.8	.05
	Re-Erad.	18,335	33,280	368	1,297	183.50	148.45	4,608.74	255.54	5,196.23	.283	1.8	.07
	Total	19,825	52,382	400	1,364	242.90	148.45	4,805.69	292.34	5,489.38	.277	2.6	.07
1934	Initial	1,682	24,958	94	45	186.80	-	-	-	186.80	.111	14.8	.03
	Re-Erad.	7,181	7,465	-	247	-	-	907.00	-	907.00	.126	1.0	.03
	Total	8,863	32,423	94	292	186.80	-	907.00	-	1,093.80	.123	3.7	.03
1935	Initial	143	1,608	320	27	46.90	-	-	-	46.90	.317	10.9	.18
	Re-Erad.	11,374	5,548	145	367	34.75	-	1,178.78	-	1,213.53	.107	0.5	.03
	Total	11,522	7,156	465	394	31.65	-	1,178.78	-	1,260.43	.109	0.6	.03
1936	Initial	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	3,622	6,194	30	346	-	-	1,288.62	-	1,288.62	.349	1.7	.09
	Total	3,622	6,194	30	346	-	-	1,288.62	-	1,288.62	.349	1.7	.09
1937	Initial	390	-	25	2	1.60	-	-	-	1.60	.004	-	.001
	Re-Erad.	10,569	6,566	66	323	41.90	-	1,267.63	-	1,309.53	.124	0.6	.03
	Total	10,959	6,566	91	325	43.50	-	1,267.63	-	1,311.13	.120	0.6	.03
1938	Initial	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	8,430	5,999	9	267	-	-	1,083.78	-	1,083.78	.129	0.7	.03
	Total	8,430	5,999	9	267	-	-	1,083.78	-	1,083.78	.129	0.7	.03
Totals	Initial	16,490	178,967	1930	1,271	879.72	-	2,930.82	549.59	4,160.13	.252	10.9	.08
	Re-Erad.	120,008	163,263	2407	7,255	1102.24	156.18	23,224.45	653.37	25,116.24	.209	1.4	.06
	Total	136,498	342,230	4337	8,526	1981.96	156.18	26,155.27	982.96	29,276.37	.214	2.5	.06

Basis of Costs: See Page 26.

Ribes Nigrum Elimination - Regular Cooperative Program

The cooperating states are eliminating *Ribes nigrum* as rapidly as practicable under existing conditions. Such bushes are an important factor in the long distance spread and local establishment of the rust. The elimination of these *Ribes* has been conducted as a special project in four Northeastern States - Connecticut (1930-1935), Massachusetts (1930-1938), Rhode Island (1929-1933), and New York (1928-1936). The work has been completed in all of these states, except New York. In that state containing 996 townships, the project has been finished in 225 townships and partly completed in 50 others. All of the mentioned states, except Massachusetts, have laws which prohibit the possession of such bushes. In the other five Northeastern States, the cultivated black currants are destroyed in connection with the work of eradicating wild *Ribes* and other cultivated bushes. It may, however, be advisable to make special arrangements for eliminating *Ribes nigrum* outside the control areas. The section of the Northeast now most in need of black currant elimination comprises Pennsylvania, New Jersey, and the western half of New York where the pine areas are scattered. However, many factors need careful consideration before adopting a policy regarding the elimination of *Ribes nigrum* in these remaining areas. No black currant elimination work was performed during 1938 under the regular program. In fact, the work on this project during 1938 was limited to a W.P.A. recheck for such bushes in Norfolk County, Massachusetts.

Table 17 summarizes the results of the special black currant elimination work conducted under the Regular Cooperative Program during the period 1918-1938, inclusive.

Table 17. Special Black Currant Elimination Work Under The Regular Cooperative Program in Northeastern States, 1918-1938, Inclusive.

State	No. Properties Inspected	No. Patches Ribes Located	No. Ribes Pulled			Total Man Days	Cost				
			Nigrum	Other Cult.	Total		Indiv.	State	B.P.I.	P.W.A.	Total
Mass.	393,306	4,494	32,115	-	32,115	5,552 $\frac{1}{2}$	2351.80	20,576.44	100.00	-	23,028.24
R.I.	110,137	1,917	16,219	1093	17,312	1,929	-	9,178.55	675.53	473.80	10,327.88
Conn.	56,960	2,713	354	18,696	19,050	1,533	-	2,509.33	3647.42	912.26	7,069.01
N.Y.	522,400	5,102	36,930	761	37,691	5,135 $\frac{1}{2}$	-	27,277.37	-	-	27,277.37
Totals	1,082,802	14,226	85,618	20,550	106,168	14,150	2351.80	59,541.69	4422.95	1386.06	67,702.50

Basis of costs: Includes cost of laborers, scouts, and foremen while engaged in locating and destroying *Ribes nigrum* and other cultivated bushes as indicated - owners' labor figured at rate of 40 cents per hour.

Blister Rust Canker Elimination Work - Regular Cooperative Program

Blister rust canker elimination work under this program has been restricted to the 1932 project at Acadia National Park in Maine, and a few instances where individual owners in Maine and Vermont paid the entire costs of such work on their properties during 1932, 1933, 1937 and 1938. Most of the canker elimination work in this Region has been performed on public lands in connection with the Emergency programs.

During 1938, three land owners in Maine and Vermont expended \$1,064.00 for wages of laborers engaged in removing blister rust cankers from the white pines on their properties. These projects were supervised technically by the respective blister rust control leaders. Table 18 summarizes the results of the 1938 activities.

Table 18 - Blister Rust Canker Elimination Work Conducted Under Regular Cooperative Program in Northeastern States During 1938.

State		Maine	Vermont	Totals
Number individual Cooperators		2	1	3
Est. No. pines examined		2,350	7,695	10,045
No. fatally infected pines cut down		1,063	832	1,885
No. pines from which cankers removed		377	965	1,342
No. cankers removed	Branch	2,065	2,041	4,106
	Stem	215	-	215
Total man days		258	74	332
Cost	Individuals	\$845.52	\$220.48	\$1,064.00
	State	31.65	-	31.65
	Total	875.17	220.48	1,095.65

Basis of costs: - Includes wages of laborers and foremen, employed by the land owners, while engaged on canker elimination work.

Table 19 - Blister Rust Canker Elimination Work Conducted Under Regular Cooperative Program in Northeastern States, 1932-1938, Inclusive.

State		Maine	Vermont	Totals
Est. no. pines examined		96,817	9,692	106,509
No. fatally infected pines cut down		8,186	879	9,065
No. pines from which cankers removed		12,520	1,118	13,638
No. cankers removed	Branch	18,732	2,189	20,921
	Stem	1,866	14	1,880
Total man days		718	92	810
Cost	Individuals	\$2,048.64	\$291.18	\$2,339.82
	State	31.65	-	31.65
	National Park Service	321.04	-	321.04
	Total	2,401.33	291.18	2,692.51

Basis of costs: - Includes wages of laborers and foremen (employed by land owners and National Park Service) while engaged on blister rust canker elimination work - cost of equipment purchased by National Park Service.

Table 19 includes the results of the 1932 work at Acadia National Park in Maine when 2,546 pines were examined and 319 fatally infected trees cut down. In addition,

1,480 branch cankers and 61 stem infections were removed from 715 other infected pines. This 1932 project at Acadia National Park required 100 days labor and the total cost of the work was \$321.04 to the National Park Service. C.C.C. laborers were used on similar activities at Acadia National Park during the period 1933-1938, inclusive. See Table 33 for the results of this C.C.C. work.

In addition to the canker elimination work reported in Table 19, the ornamental pines on the state reservation at Saratoga, New York were examined by state employees for blister rust infection during 1933. The area contained 75 acres of plantations about 20 years old. There was also considerable natural white pine scattered over some 700 acres of woodlands. The pines had been previously pruned to a height of 6 feet which aided materially in inspecting them for infection. The work disclosed a total of 113 diseased trees, 49 of which had died from blister rust. These dead trees were cut down, and limb infections were also removed from 64 other pines. No time or cost figures are available for this work.

Pine and Control Area Mapping - Regular Cooperative Program

Pine and control area mapping is an essential part of blister rust control, especially in sections where the pine areas are scattered and where the Ribes eradication work is performed by crews composed of inexperienced men obtained from relief sources. Such maps assist the crew foremen in locating the boundaries of control areas, and consequently limit their activities to crew supervision.

During the period of experimental control work from 1918 to 1921, the white pine areas in Rhode Island, Connecticut and Vermont were roughly mapped, also a few sample townships were type mapped in Maine, New Hampshire and Massachusetts in order to develop methods and determine costs. The amount of mapping work was necessarily limited, as the field personnel was employed only during the Ribes eradication season. Funds were sufficient to employ only the state leaders on a yearly basis. Since 1922, a force of district leaders have also been employed full time. During the Ribes eradication season these men are engaged chiefly in supervising crew and scout activities and prior to the advent of the Emergency programs in 1933, their time during the fall, winter and early spring months was devoted mainly to informational and service activities to secure local cooperation in control activities during the following Ribes eradication season. Consequently, these leaders were unable to do much pine mapping. Also in large portions of Maine, New Hampshire, Massachusetts and New York the pine areas were so continuous that detailed pine mapping was not essential. Under such conditions, where town and state money was available, the eradication work was conducted on the basis of road block units irrespective of property lines. In New York, woodland maps were prepared for many of the counties chiefly by state men. Such maps showed, by symbols, the location of the white pine areas. In all instances, the boundaries of all control areas have been designated on maps, but the pine areas within the control areas have been mapped only during recent years when relief labor has been available for such work.

During the past few years, the unprotected pine areas have been smaller

and more scattered. Consequently, there has been a greater need for detailed pine and control area maps. The Emergency programs since 1933 have been of great assistance in providing men to do the necessary mapping. Similar activities on a small scale were conducted under the Regular Cooperative Program during the period 1923-1936, inclusive, but all of the 1937 and 1938 work was performed under the C.C.C. and W.P.A. Programs. The amount of pine and control area mapping accomplished under the Regular Cooperative Program since 1933 is indicated in Table 20, while the total results on this project under all programs are given in Table 111.

Table 20. - Pine and Control Area Mapping Under The Regular Cooperative Program in Northeastern States, 1933-1938, Inclusive.

State	Period Work Performed	Acreage Mapped	Acreage Examined But Not Mapped	Total Man Days	Total Cost (All State)
Maine	1933 and 1935	21,976	\$6,055	104	625.98
N.H.	1935	18,338	-	311	1,244.00
Conn.	1934	120	1,600	7	35.00
N.Y.	1934-1936	180,738	76,070	990	4,752.00
Totals	1933-1936	221,172	113,725	1,412	6,656.98

Table 21. - Total Expenditures, By Cooperating Agencies, Under The Regular Cooperative Program
In Northeastern States During 1938.

State	State Funds	Towns	Individuals	Counties	B. E. & P. Q.	W. P. A.	Total
Maine	4,483.49	4,760.97	1,027.52	-	11,970.43	19.03	22,261.44
N. H.	4,378.16	11,864.37	194.80	-	10,542.08	-	26,979.41
Vt.	1,166.55	-	664.28	-	6,884.50	-	8,715.33
Mass.	863.56	-	650.40	-	10,435.13	-	11,929.09
R. I.	1,982.17	-	-	-	553.92	-	2,336.09
Conn.	3,054.91	-	-	-	3,623.79	-	6,678.70
N. Y.	19,125.45	-	1,342.07	3,988.40	15,073.81	-	42,529.73
N. J.	-	-	-	-	-	-	-
Penna.	11,534.00	-	77.25	-	7,563.58	-	19,194.83
Totals	46,588.29	16,625.34	3,936.32	3,988.40	64,467.24	19.03	140,624.62

Table 22 - Total Cooperative Expenditures, By Projects, Under Regular Cooperative Program
In Northeastern States During 1938.

State	Supervision and BRC Agent Activities	Ribes Eradication	Eradication Assistants and Checkers	Black Currant Elimination	Nursery Sanitation	Ribes Compensation	Blister Rust Canker Elimination	Field Data		Total
								Mapping	General	
Maine	14,035.57	6,558.08	792.62	-	-	-	875.17	-	-	22,261.44
N. H.	11,865.12	15,100.29	-	-	14.00	-	-	-	-	26,979.41
Vt.	8,019.05	475.80	-	-	-	-	220.48	-	-	8,715.33
Mass.	10,913.63	822.48	-	-	170.98	22.00	-	-	-	11,929.09
R. I.	2,336.09	-	-	-	-	-	-	-	-	2,336.09
Conn.	6,321.50	-	-	-	357.20	-	-	-	-	6,678.70
N. Y.	13,073.81	20,288.75	1,797.25	-	-	17.50	-	-	7,352.42	42,529.73
N. J.	-	-	-	-	-	-	-	-	-	-
Penna.	13,139.57	3,802.18	23.97	-	541.60	-	-	-	1,687.51	19,194.83
Totals	79,704.54	47,047.58	2,613.84	-	1,083.78	39.50	1,095.65	-	9,039.93	140,624.62

Table 23 - Total Expenditures, By Cooperating Agencies, Under Regular Cooperative Program
In Northeastern States, 1918-1938, Inclusive.

State	State Funds	Towns	Individuals	Counties	P.W.A.	B.P.I.	BE&PQ	Forest Service	Park Service	WPA	Total
Maine	115,533.00	107,455.54	84,750.21	-	-	249,874.54	28,555.19	-	9639.44	38.03	595,845.95
N.H.	286,827.83	400,675.81	47,804.51	-	-	434,415.50	26,986.49	1946.91	-	-	1,198,657.06
Vt.	53,745.06	1,077.91	72,113.60	-	-	119,313.44	19,090.53	-	-	-	265,340.51
Mass.	286,085.53	1,699.22	92,268.54	-	-	323,303.88	26,790.84	-	-	-	730,147.81
R.I.	60,118.05	-	681.36	-	473.80	43,883.83	1,476.10	-	-	-	106,533.14
Conn.	125,867.51	12,187.89	8,383.69	-	912.26	101,725.56	13,793.20	-	-	-	262,870.11
N.Y.	982,852.11	-	171,020.67	17,622.89	-	479,769.34	28,114.33	-	-	-	1,679,379.34
N.J.	15,700.94	-	-	-	-	6,271.28	2,920.10	-	-	-	24,892.32
Penna.	100,284.72	-	1,872.73	-	-	31,619.21	20,163.47	779.77	-	-	154,719.90
Totals	2,027,014.75	523,096.37	478,795.11	17,622.89	1,386.06	1,730,176.58	167,890.03	2726.68	9639.44	38.03	5,018,385.96

Table 24 - Total Cooperative Expenditures, By Projects, Under Regular Cooperative Program
In Northeastern States, 1918-1938, Inclusive.

State	Supervision and BRC Agent Activities	Ribes Eradication	Eradication Assistants and Checkers	Black Currant Elimination	Nursery Sanitation	Ribes Compens- sation	Blister Rust Canker Elimination	Field Data		Total
								Mapping	General	
Maine	284,263.75	272,140.84	1,638.85	-	10,261.10	-	2401.33	625.98	24,514.10	595,845.95
N.H.	439,769.57	678,000.55	32,188.46	-	494.99	550.60	-	1,244.00	46,408.88	1,198,657.06
Vt.	142,354.31	95,432.36	-	-	516.01	792.91	291.18	-	25,953.57	265,340.51
Mass.	311,201.87	328,935.90	-	23,028.24	5,618.58	14,547.10	-	-	48,816.12	730,147.81
R.I.	51,958.38	32,238.35	1,000.00	10,327.88	1,255.05	509.79	-	-	9,242.69	106,533.14
Conn.	128,166.36	76,265.58	475.06	7,069.01	5,125.48	103.50	-	35.00	45,629.62	262,870.11
N.Y.	442,258.57	813,805.26	89,344.26	27,277.37	15,821.76	5,573.44	-	4,752.00	282,546.69	1,679,379.34
N.J.	20,032.71	-	-	-	300.53	-	-	-	4,559.03	24,892.32
Penna.	88,015.79	47,553.30	2,454.07	-	4,121.09	153.00	-	-	12,422.65	154,719.90
Totals	1,908,021.81	2,344,372.14	127,100.70	67,702.50	39,515.58	22,230.34	2,692.51	6,656.98	500,093.40	5,018,385.96

BLISTER RUST CONTROL ACTIVITIES UNDER THE
C.C.C. CONTROL PROGRAM IN THE NORTHEASTERN STATES

The C.C.C. Program in the Northeastern States during the period 1933 to 1938, inclusive, has provided an excellent opportunity for extending the application of blister rust control measures to unprotected white pine areas of commercial and scenic importance. Prior control work on many of these areas had been prevented either by lack of cooperation or because the cost of eradicating the existing Ribes was excessive under ordinary conditions. The control project was especially adapted to the C.C.C. Program, since the Ribes eradication work required chiefly manual labor and only a small expenditure for equipment. The C.C.C. Program was the first of the various Emergency programs to furnish labor for employment on our project. The states welcomed this work at the beginning of the program not only for the contemplated protection results, but because it offered a means of giving immediate and effective employment, under regular trained supervision, to hundreds of C.C.C. men during the organization period when other projects for various reasons could not be put into action. During these first few weeks, blister rust control gave many of the enlisted men their first opportunity to become acquainted with the woods, to learn discipline, and to obtain an appreciation of a day's work. At the winter meeting of New England Section of the Society of American Foresters in 1934 Mr. Tillotson, in charge of the C.C.C. program in the Northeastern States, publicly remarked that he wished to commend the blister rust control organization for the way it handled its project in connection with the C.C.C. program. He mentioned that this control organization, being in effective operation at the start of the C.C.C. work, accomplished excellent results without delay or confusion.

The C.C.C. program has provided not only an opportunity for the employment of a large force of workers on Ribes eradication, but also permitted many men to be used on such control projects as pine and control area mapping, nursery sanitation, and blister rust canker elimination.

Allotment of Labor

No direct allotment of C.C.C. funds has been made for blister rust control projects in the Northeastern States. Prior to the start of control activities each year, the respective state blister rust control leaders and the C.C.C. officials have developed plans providing a definite number of man days of C.C.C. labor from certain camps for control activities. The regional leader has cooperated with the National Park and U. S. Forest officials in preparing similar plans for the C.C.C. projects at Acadia National Park in Maine, the White Mountain National Forest in New Hampshire and the Allegheny National Forest in Pennsylvania.

Responsibilities and Direction of Work

The field activities of the crews assigned to blister rust control work have been directed by C.C.C. technical foremen and checkers. In a few instances, experienced state paid foremen have been assigned to assist in directing the C.C.C. crews. The combined force was given technical supervision by the regular permanent state and district blister rust control leaders, except on federal lands where such technical supervision was supplied by the regional blister rust control office personnel. These leaders selected the areas to be protected, assisted in training the field men in proper methods of control, and checked the work to make sure desired results were accomplished. The only exception to the above occurred in Pennsylvania. The district leaders in that state did not supervise any C.C.C. work. Necessary supervision was provided by one or two state employees assisted by 5 to 17 C.C.C. checkers. The work of all these supervisory men was directed by the state leader.

During June to September 1933, three of the district blister rust control leaders in Maine and two in New York functioned as superintendents of C.C.C. camps devoted entirely to Ribes eradication work. None of the district leaders acted as camp superintendents after 1933. Due to various other emergency projects, since September, 1933, the blister rust control leaders have devoted approximately one fourth of their time to C.C.C. activities. In most instances, the technical foremen and checkers provided for the C.C.C. program in 1933 consisted of well qualified and experienced men recommended by the blister rust control supervisory force. Few personnel changes were made in the C.C.C. supervisory force prior to 1935. However, during the past four years, many changes occurred; and when new camps were established, politics frequently entered into the selection of such men. In spite of this condition, the results were generally satisfactory, due in a large part to the effective efforts of the district leaders.

Selection Of Areas To Be Protected

The areas selected for control work by the C.C.C. personnel were in most cases within a radius of 20 miles of the respective camps, preference being given to areas requiring initial protection. Control work in Massachusetts was limited to publicly-owned lands. It was also restricted to such lands in New York during 1933, and in Pennsylvania from 1933-1935, inclusive. With these exceptions, Ribes eradication work under the C.C.C. Program in the Northeastern Region has been performed on both public and private lands, about 90% of the total area covered being in private ownership.

Distribution of Work and Personnel Employed

Ribes eradication work was conducted during 1933 from a total of 114 C.C.C. camps in the Northeastern States (Table 25). Five of these camps were located in the White Mountain National Forest, one in the Green Mountain National Forest, two at Acadia National Park, and the other 106 were state camps scattered over the forest region of New England, New York, and Pennsylvania. Control work from some of the Pennsylvania camps was started on May 22, 1933, but in the other states most of the camps were not in a position to do field work until the latter part of June. The number of enlisted men employed on control work necessarily varied from day to day, the maximum number of men at any one time during 1933 being 3,294. Three of the Maine camps and two in New York were devoted entirely to Ribes eradication work from June to September, 1933. The number of enlisted men assigned to blister rust control work at each of the other 109 camps ranged from an average of 6 to 100. The field activities of these men were directed by 204 C.C.C. technical foremen and checkers and 36 state foremen.

During 1934, Ribes eradication work was conducted from a total of 125 C.C.C. camps in all of the Northeastern States (Table 25). Four of these camps were located on the White Mountain National Forest, two at Acadia National Park, and two at the Allegheny National Forest. The maximum number of enlisted men assigned to blister rust work from these 125 camps at any one time was 2,483. Four of the New York camps were devoted chiefly to Ribes eradication work from May to September, and two other New York camps had 67 and 76 men, respectively, assigned to control work during this period. In Maine, an average of 86 men worked out of one camp and 57 out of another. The number of enlisted men assigned to blister rust control from each of the other 117 camps ranged from an average of 5 to 43 men per day. The field activities of these laborers were supervised by 287 C.C.C. technical foremen and checkers.

Table 25 - Distribution of Work and Personnel Employed on C.C.C. Ribes Eradication Projects in Northeastern States, 1933-1938, Inclusive

State		No. C.C.C. Camps Where Control Work Performed						No. Towns Where Control Work Performed					
		1933	1934	1935	1936	1937	1938	1933	1934	1935	1936	1937	1938
Maine	State	4	4	4	4	3	3	7	11	10	13	9	6
	Acadia Park	2	2	2	2	1	-	6	5	2	2	1	-
	Total	6	6	6	6	4	3	13	16	12	15	10	5
N.H.	State	5	5	6	8	6	-	23	16	27	18	10	-
	W. Mt. N.F.	4	3	2	-	-	1	10	3	4	-	-	2
	Total	9	8	8	8	6	1	33	19	31	18	10	2
Vt.		7	6	3	6	6	6	17	14	4	6	9	9
Mass.		12	9	10	10	3	11	17	15	25	14	4	24
R.I.		3	2	6	4	4	2	3	2	8	6	5	2
Conn.		7	8	10	7	8	7	19	15	40	10	12	22
N.Y.		8	29	23	38	27	22	19	75	64	125	58	60
N.J.		-	1	-	-	-	-	-	1	-	-	-	-
Penna.	State	62	54	69	69	49	32	62	59	109	140	91	78
	Allegheny N.F.	-	2	3	3	-	-	-	2	4	3	-	-
	Total	62	56	72	72	49	32	62	61	113	143	91	78
All States	State	108	118	151	135	106	82	167	208	287	332	198	200
	Nat. Park	2	2	2	2	1	-	6	6	2	2	1	-
	Nat. Forests	4	5	5	3	-	1	10	5	8	3	-	2
	Total	114	125	158	140	107	83	183	218	297	337	199	202

State		Average Number of Enlisted Men Employed*						Number of Technical Foremen and Checkers					
		1933	1934	1935	1936	1937	1938	1933	1934	1935	1936	1937	1938
Maine	State	310	239	452	384	123	211	38	31	40	27	18	13
	Acadia Park	79	53	57	36	29	-	9	4	4	2	1	-
	Total	389	292	509	420	152	211	47	35	44	29	19	13
N.H.	State	342	130	154	151	69	-	34	17	13	13	9	-
	W. Mt. N.F.	55	44	47	-	-	10	8	3	3	-	-	-
	Total	397	174	201	151	69	10	42	20	16	13	9	-
Vt.		187	147	97	84	101	109	15	9	4	4	8	-
Mass.		99	112	141	134	29	114	8	9	11	8	2	4
R.I.		28	62	237	92	84	48	4	5	12	4	5	2
Conn.		144	161	182	115	106	135	12	13	15	9	9	-
N.Y.		441	1023	823	1280	902	562	67	121	71	94	73	43
N.J.		-	6	-	-	-	-	-	-	-	-	-	-
Penna.	State	347	784	1142	878	987	624	45	73	89	80	62	31
	Allegheny N.F.	-	26	41	47	-	-	-	2	3	1	-	-
	Total	347	810	1183	925	987	624	45	75	92	81	62	31
All States	State	1898	2663	3228	3118	2401	1803	223	278	255	239	186	105
	Nat. Park	79	53	57	36	29	-	9	4	4	2	1	-
	Nat. Forests	55	70	88	47	-	10	8	5	6	3	-	-
	Total	2032	2786	3373	3201	2430	1813	240	287	265	242	187	105

* Based on average number of men employed for period of work.

The number of C.C.C. men available for blister rust control work during 1935 and 1936 was increased somewhat over the number employed during the first two years of the program. In New York, a few camps continued to confine their work chiefly to Ribes eradication during the period May to September of each year. All states, except New Jersey, conducted work under the C.C.C. Program during 1935 and 1936. Table 25 shows the distribution of the work and the personnel employed. The number of enlisted men assigned to the project from each camp ranged from 6 to 130 in 1935 and from an average of 2 to 122 during 1936.

The closing of a number of C.C.C. camps during 1937 resulted in a corresponding decrease in the blister rust control projects. As indicated in Table 25 C.C.C. labor was obtained from 107 camps during 1937 as compared with 140 the preceding year, while the average number of enlisted men employed dropped from 3,201 in 1936 to 2,430 during the 1937 season. The average number of laborers assigned to the project in each camp ranged from 5 to 122. Work was performed in all states, except New Jersey, but no projects were conducted on the White Mountain and Allegheny National Forests during 1937.

A further decrease occurred during 1938 in the number of C.C.C. camps (83) performing Ribes eradication work and in the average number of C.C.C. men (1,813) assigned to our project. The decreases were due chiefly to the closing of many of the camps and to the fact that no control work was needed within working distance of several other camps. In New Hampshire, no blister rust control work was performed during 1938 from the six state camps because other projects were considered more urgent by the state and C.C.C. officials. Also, at Acadia National Park no control work was needed during 1938. In Pennsylvania, Ribes eradication work was conducted from 32 of the 53 existing camps.

Basis For Personnel Costs and Hours of Work

It is impossible to give accurate cost figures for the enlisted personnel under the C.C.C. Program. In compiling such cost data for this report, the wages of the enlisted men were figured at the rate of \$1.00 per day plus an arbitrary charge for subsistence. Such expenses were computed at the rate of 35 cents per man day in 1933, 40 cents in 1934, and 50 cents for the period 1935 to 1938, inclusive. Accurate data were available for the wages and expenses of the technical foremen and checkers, and any state foremen assigned to the C.C.C. work. The former have been paid monthly salaries ranging from \$100. to \$167.50 per month, the majority of them receiving from \$130.00 to \$140.00.

In computing the cost of the C.C.C. enlisted mens' time, their total time (8 hours per day) has been charged. This includes time spent traveling to and from work and the lunch hour. During the early months of the program, lack of transportation and the practice of requiring crews to report back to camp for the noon meal materially reduced the actual working time of the men and caused a physical reaction to the personnel that was not favorable to productive results. These difficulties were overcome when the camps were supplied with adequate transportation facilities and a regulation was issued in 1934 requiring each enlisted man to perform 30 hours of actual field work per week.

Transportation

In most instances, adequate transportation facilities have been available for the C.C.C. work, except during the first few months of the program. Trained drivers have been assigned to each truck, and safety regulations enforced. In this report, where actual transportation costs were not available for the C.C.C. projects, such costs were estimated either on the basis of \$40.00 per month for each truck plus 3 cents

per mile for operating costs or at the rate of 12 cents per mile for each mile the truck was used on the project.

Accomplishments in Various Blister Rust Control Projects
Under C.C.C. Program in Northeastern States

Ribes Eradication Work During 1938

C.C.C. personnel was used on Ribes eradication work during 1938 in all of the Northeastern States, except New Jersey and from the state C.C.C. camps in New Hampshire. An average of 1,813 enlisted men from 83 C.C.C. camps were assigned to control projects conducted in 202 townships. Such activities were conducted chiefly during the period May 1 - September 30, except in New Hampshire where work was performed under this program only during the period June 15 to July 16.

A total of 242,472 acres was cleared of 4,245,056 wild Ribes and 4,531 cultivated bushes as a result of 111,953 man days labor by the C.C.C. crews during 1938. Of this total, 100,397 acres was initial control work. The total acreage examined for Ribes under the C.C.C. Program represents 32.7% of all the 1938 control work in this Region.

As previously mentioned, it is impossible to give accurate cost figures for the work under the C.C.C. Program, except for the technical foreman and checkers and any crew foremen furnished by the states. The estimated cost of the 1938 C.C.C. Ribes eradication work, exclusive of supervision, amounted to \$188,884.16, or \$.779 per acre. The basis used in computing the C.C.C. costs is shown under Table 26. The per acre values as indicated in Tables 26 to 28 and in the graphs on pages 44 and 45 show that the cost of the 1938 C.C.C. work as well as for previous years were considerably higher than the average cost of eradicating Ribes in connection with the regular work. This can be attributed in part to the following causes:

(1) The district blister rust control leaders' activities in connection with the C.C.C. Program have been limited to technical supervision. They instructed the C.C.C. personnel as to where and how to do the necessary control work and performed sufficient administrative checking to make sure the desired results were obtained. However, lack of full authority over the field men was a severe handicap in many instances. The amount and quality of the supervision provided by the C.C.C. technical foremen was also inadequate in some cases.

(2) The sites selected for the C.C.C. work usually represented difficulty factors above average. The number of Ribes eradicated per acre on the C.C.C. work has averaged about three times as many as on the work performed during previous years under the Regular Cooperative Program.

(3) Practically all of the total acreage has been worked by crews in strip formation. In many instances, the areas undoubtedly could have been worked by the scout method and the per acre costs materially reduced, but experienced men were not available. The enlisted personnel consisted chiefly of men from the cities with little or no experience in manual labor or woods work. The necessity of emphasizing the fundamentals of Ribes eradication work to a changing and inexperienced personnel frequently prevented refinements in crew methods to eliminate lost motion and to increase crew flexibility under varying field conditions.

(4) The total time of the C.C.C. enlisted men (eight hours per man day) has been charged in computing the cost of the eradication work. This includes time consumed in traveling to and from work and the lunch hour. Consequently, only about

six hours of actual field work was performed per day on the C.C.C. projects as compared with eight hours for similar work under the Regular Cooperative and other emergency programs. This difference of 25% in productive time should be considered in comparing the costs of the C.C.C. work with that of similar activities conducted under other programs.

A comparison of the per acre values for the 1938 Ribes eradication work under the C.C.C. Program in the different states, as indicated by Table 26, shows considerable variation. The average number of man days required per acre is, of course, dependent on many factors: such as the number, size and distribution of the Ribes; density of undergrowth; topography; and the experience, ability and efficiency of the personnel. The relatively low per acre man day figures for Rhode Island and Connecticut are due primarily to the small number and size of the Ribes in these two states; whereas, in Pennsylvania and New York, numerous large bushes are found in many of the control areas, some of which comprise small scattered pine lots in remote, wooded, hilly areas. In the other Northeastern States, the C.C.C. work has been restricted frequently to areas with heavy Ribes concentrations, as indicated by the per acre values for the 1938 initial control work in Maine.

No satisfactory comparison can be made between the per acre values for the 1938 initial and re-eradication work given in Table 26 because the same areas are not involved. In New Hampshire and Connecticut the man day average for the re-eradication work is higher than for the initial work, so are the number of Ribes in the latter state, but not in the former. Apparently, the number of Ribes per acre was not the major factor influencing time and cost on the C.C.C. work in New Hampshire. This is also indicated by the per acre values in some of the other states.

Table 26 summarizes the 1938 C.C.C. Ribes eradication work by states and classes of work.

Ribes Eradication Work - 1933 to 1938, Inclusive

Tables 27 and 28 summarize the results of the C.C.C. Ribes eradication work by states, years, and classes of work during the period 1933-1938, inclusive. The total acreage cleared of Ribes (2,210,648) under the C.C.C. Program represents 38.6% of all the control work performed in the Northeastern States during this period. It will be noted in Table 28 and the graph on page 45 that the average man days per acre for all the C.C.C. work decreased slightly each year from 1933-1936, inclusive, but increased during 1937. In 1938 the average man days per acre was less than during the preceding year. With the exception of 1934, decreases also occurred in the average number of Ribes per acre. The average cost per acre decreased in 1934 and 1935 in spite of the increased charge for subsistence expenses.

Numerous inspections of the C.C.C. work show that, on the whole, the quality of the Ribes eradication work in the Region was satisfactory. The supervisory officials acquitted themselves commendably in all respects, and the enlisted men in most cases gave the job their best efforts during the time they spent in the field. The project has not only resulted in the protection of hundreds of thousands of acres of valuable pine, but has helped to rehabilitate thousands of young men, many of whom were greatly in need of assistance.

Table 26.- Ribes Eradication Work Performed Under C.C.C. Program in
Northeastern States During 1938.

(Excludes nursery sanitation and cultivated black currant elimination)

State	Type of Erad.	Acreage		No.		Total Man Days	State	C.C.C.	Total	Per Acre	
		Total Worked	Pine Protected	Ribes Pulled Wild	Cult.					Cost	Ribes Days
Maine	Initial	8,260	2,115	862,143	522	7,525	-	12,472.72	12,472.72	1.51	104.4
	Re-Erad.	45,521	14,308	603,904	592	14,999	-	24,428.71	24,428.71	.537	13.4
	Total	53,781	16,423	1,471,047	1114	22,522	-	36,901.43	36,901.43	.686	27.4
N.H.	Initial	724	75	8,213	85	82	-	180.64	180.64	.250	11.3
	Re-Erad.	348	55	2,581	-	67	-	147.66	147.66	.427	7.4
	Total	1,072	110	10,794	85	149	-	328.30	328.30	.306	10.1
Vt.	Initial	6,043	969	102,974	38	2,890	-	4,911.55	4,911.55	.813	17.0
	Re-Erad.	7,786	1,470	200,403	12	3,498	-	5,810.69	5,810.69	.746	25.7
	Total	13,829	2,439	303,377	50	6,388	-	10,722.24	10,722.24	.775	21.9
Mass.	Initial	6,277	1,471	111,124	3	2,249	-	3,940.97	3,940.97	.628	17.7
	Re-Erad.	8,345	2,443	52,171	76	2,910	-	5,301.95	5,301.95	.635	6.3
	Total	14,622	3,914	163,296	79	5,159	-	9,242.92	9,242.92	.632	11.2
R.I.	Initial	6,872	2,969	24,162	-	2,118	-	3,453.48	3,453.48	.503	3.5
	Re-Erad.	5,073	1,889	3,452	366	1,211	-	2,039.72	2,039.72	.402	0.7
	Total	11,945	4,858	27,624	366	3,329	-	5,493.20	5,493.20	.460	2.3
Conn.	Initial	5,958	747	8,576	58	1,191	-	1,886.43	1,886.43	.317	1.4
	Re-Erad.	29,949	3,739	366,880	519	9,882	-	15,501.67	15,501.67	.518	12.3
	Total	35,907	4,486	375,456	577	11,073	-	17,388.10	17,388.10	.484	10.5
N.Y.	Initial	40,710	13,570	900,439	793	19,622	2337.85	33,258.77	35,596.62	.874	22.1
	Re-Erad.	26,239	8,746	213,533	79	8,173	975.79	13,735.21	14,711.00	.551	8.1
	Total	66,949	22,316	1,113,972	872	27,795	3313.64	46,993.98	50,307.62	.751	16.6
Penn.	Initial	25,553	4,481	602,912	1356	21,042	-	34,421.03	34,421.03	1.35	23.6
	Re-Erad.	18,814	3,360	176,579	53	14,596	-	24,079.32	24,079.32	1.28	9.4
	Total	44,367	7,841	779,491	1388	35,638	-	58,500.35	58,500.35	1.32	17.6
Totals	Initial	100,397	26,397	2,620,643	2884	56,717	2337.85	94,525.59	96,863.44	.965	26.1
	Re-Erad.	142,075	35,990	1,624,513	1697	55,256	975.79	91,044.93	92,020.72	.648	11.4
	Total	242,472	62,387	4,245,056	4581	111,953	3313.64	185,570.52	188,884.16	.779	17.6

Basis of costs: Includes wages of enlisted men figured at \$1.00 per eight hour man day plus arbitrary charge of 50 cents per day for subsistence - cost of crew transportation figured on basis of \$40. per month for each truck plus 3 cents per mile for operating costs or at rate of 12 cents per mile for each mile the truck was used on the project - and miscellaneous expenses for trail paper, picks, etc.

Table 27- Ribes Eradication Work Performed Under C.C.C. Program in
Northeastern States During Period 1933-1938, Inclusive
(Excludes nursery sanitation and cultivated Ribes Nigrum elimination)

By States

State	Type of Erad.	Acreage Worked	Ribes Pulled		Total Man Days	State	Cost		Per Acre	
			Wild	Cult.			C.C.C.	Total	Cost	Ribes
Maine	Initial	203,416	8,321,499	7,919	87,459	-	159,247.44	139,247.44	.685	40.9
	Re-Erad.	201,412	2,899,429	2,885	48,838	135.00	80,437.84	80,572.84	.400	14.4
	Total	404,828	11,220,928	10,802	136,297	135.00	219,685.28	219,820.28	.543	27.7
N.H.	Initial	82,163	5,928,275	458	47,264	81.80	74,584.24	74,666.04	.909	72.2
	Re-Erad.	39,685	1,574,602	-	15,506	62.20	24,842.61	24,904.81	.628	39.7
	Total	121,848	7,502,877	458	62,770	144.00	99,426.85	99,570.85	.817	61.6
Vt.	Initial	64,075	2,685,520	785	26,178	-	42,632.07	42,632.07	.788	49.7
	Re-Erad.	31,987	677,758	108	14,974	-	23,944.13	23,944.13	.749	21.2
	Total	86,062	3,363,278	891	41,152	-	66,576.20	66,576.20	.774	39.1
Mass.	Initial	41,214	1,119,766	2,686	17,862	-	27,556.44	27,556.44	.659	27.2
	Re-Erad.	28,428	352,331	690	12,171	-	19,313.67	19,313.67	.679	12.4
	Total	69,642	1,472,097	3,376	30,033	-	46,870.11	46,870.11	.673	21.1
R.I.	Initial	40,448	44,678	617	8,876	-	14,188.52	14,188.52	.351	1.1
	Re-Erad.	196,879	202,723	6,149	37,598	15.00	59,581.41	59,596.41	.303	1.0
	Total	237,327	247,401	6,766	46,474	15.00	73,769.93	73,784.93	.311	1.0
Conn.	Initial	100,707	448,068	4,830	13,007	-	22,369.50	22,369.50	.222	4.4
	Re-Erad.	176,929	2,101,304	3,454	50,811	-	84,606.65	84,606.65	.478	11.9
	Total	277,636	2,549,372	8,284	63,818	-	106,976.15	106,976.15	.385	9.2
N.Y.	Initial	532,371	16,695,114	29,083	239,923	22,221.90	334,692.31	406,914.21	.764	31.2
	Re-Erad.	170,046	3,365,444	1,159	80,488	5,840.63	127,745.00	133,583.63	.786	19.8
	Total	702,417	19,958,558	30,242	320,411	28,062.53	512,435.31	540,497.84	.769	28.4
N.J.	Initial	381	19,795	304	247	-	346.50	346.50	.909	52.0
	Re-Erad.	-	-	-	-	-	-	-	-	-
	Total	381	19,795	304	247	-	346.50	346.50	.909	52.0
Penns.	Initial	191,421	11,326,285	21,761	178,472	-	283,437.45	283,437.45	1.48	59.2
	Re-Erad.	119,086	2,889,153	1,873	105,729	360.00	163,431.46	163,791.46	1.38	24.3
	Total	310,507	14,215,438	23,634	284,201	360.00	446,868.91	447,228.91	1.44	45.8
Totals	Initial	1,246,196	46,489,000	68,443	619,238	22,303.70	989,054.47	1,011,358.17	.812	37.3
	Re-Erad.	964,452	14,060,744	16,324	366,115	6,412.83	583,900.77	590,313.60	.612	14.6
	Total	2,210,648	60,549,744	84,767	985,403	28,716.53	1,572,955.24	1,601,671.77	.725	27.4

Basis of costs: See Page 41.

Table 28. - Ribes Eradication Work Performed Under C.C.C. Program
in Northeastern States During Period 1933-1938, Inclusive

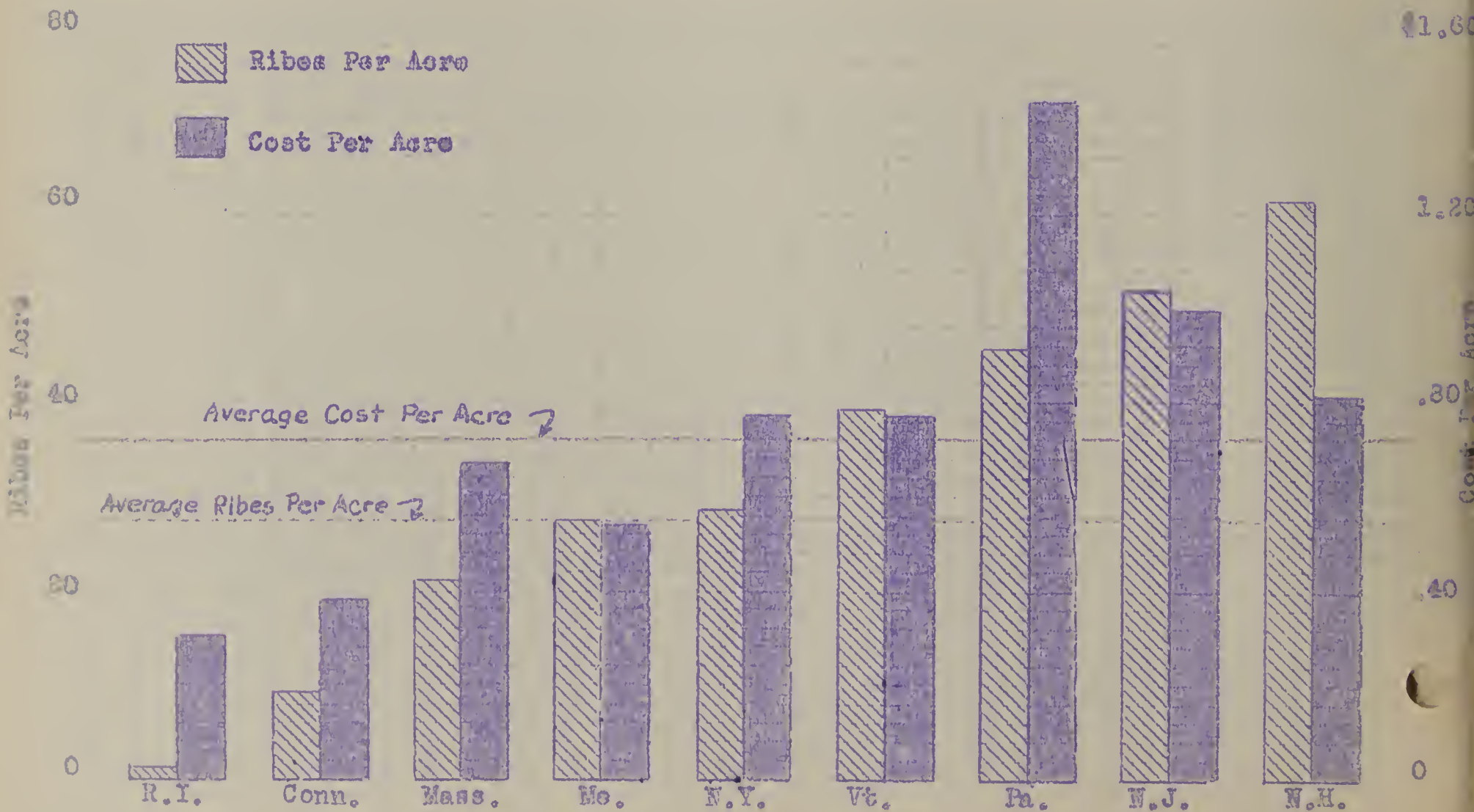
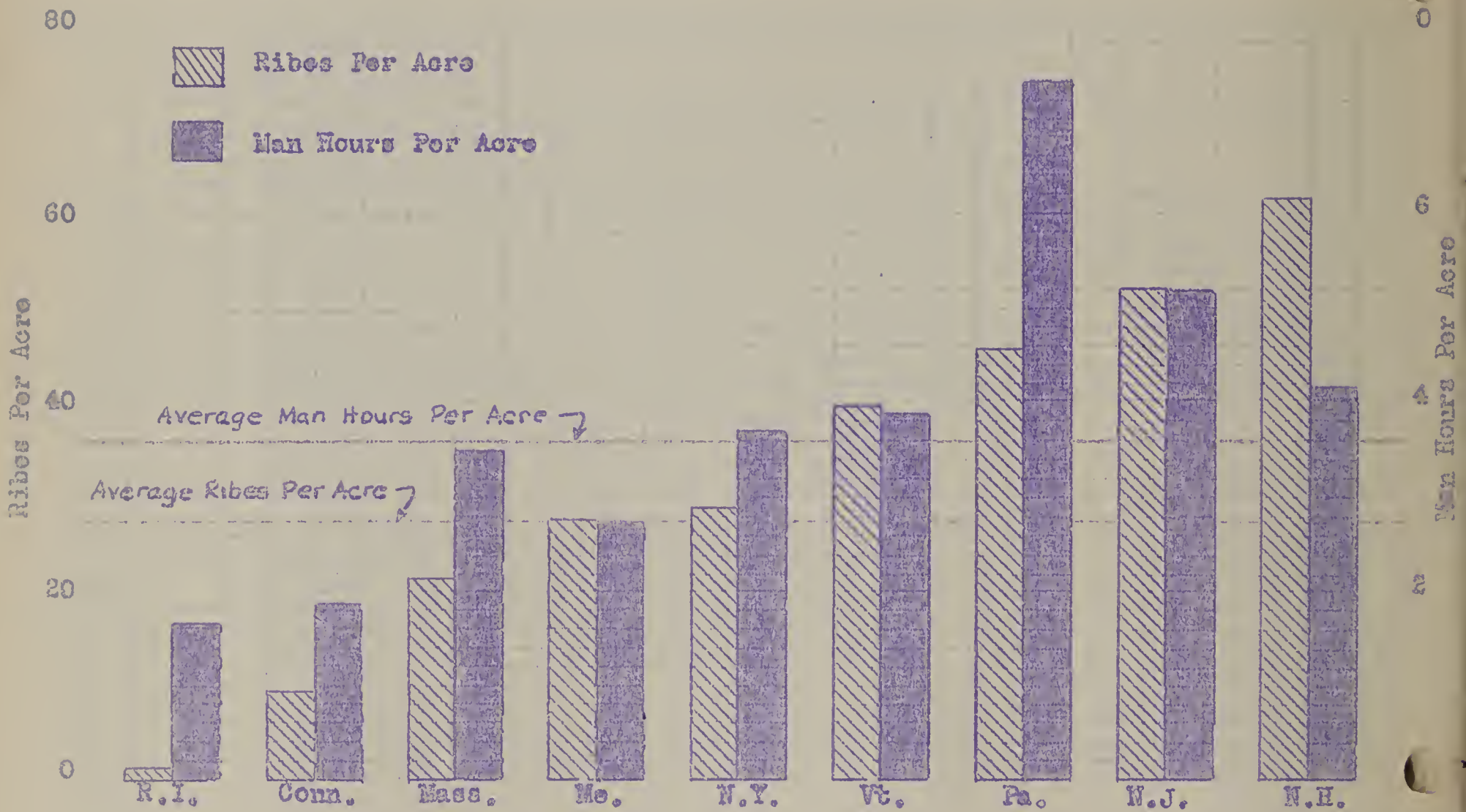
(Excludes nursery sanitation and cultivated black currant elimination)

By Years

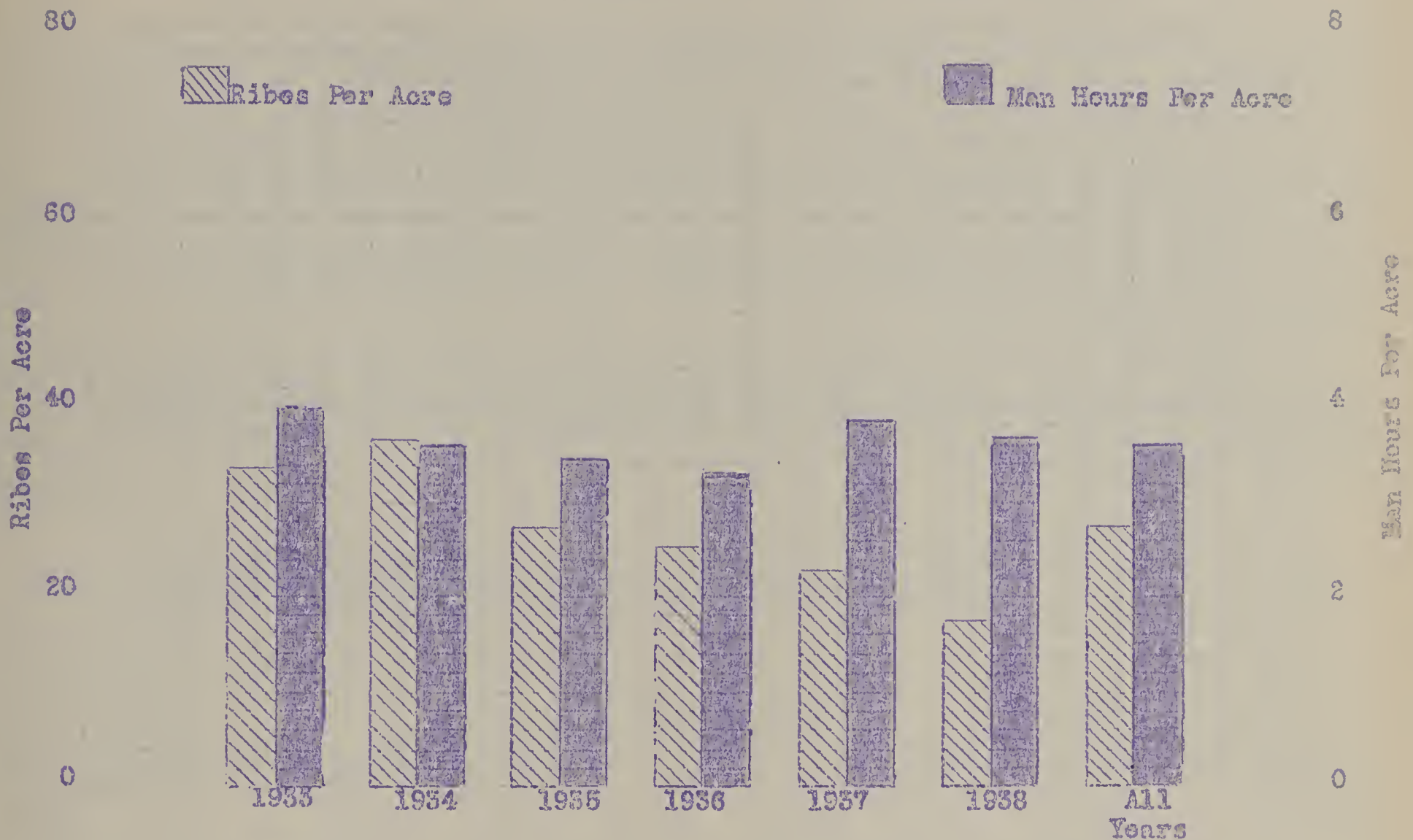
Year	Type of Erad.	Acreage Worked	Ribes Pulled		Total Man Days	State	Cost		Per Acre	
			Wild	Cult.			C.C.C.	Total	Cost	Ribes Days
1933	Initial	125,328	5,584,682	4,674	65,658	-	98,309.68	98,309.68	.784	44.6
	Re-Erad.	119,990	2,626,432	453	56,962	-	33,832.68	83,832.68	.699	21.9
	Total	245,318	8,211,114	5,127	122,620	-	182,142.36	182,142.36	.742	33.5
1934	Initial	240,433	11,254,398	8,205	106,932	2,269.80	168,122.47	170,392.27	.709	46.8
	Re-Erad.	133,527	2,392,151	939	61,266	840.20	95,394.89	96,235.09	.721	17.9
	Total	373,960	13,646,549	9,144	168,198	3,110.00	263,517.36	266,627.36	.713	36.5
1935	Initial	333,431	11,418,110	22,185	154,909	11,709.21	234,977.46	246,686.67	.740	34.2
	Re-Erad.	175,898	2,528,305	5,663	65,752	2,330.62	101,515.03	103,845.65	.590	14.4
	Total	509,329	13,946,415	27,848	220,661	14,039.83	336,492.49	350,532.32	.688	27.4
1936	Initial	295,825	10,735,179	20,508	146,380	5,593.99	242,011.80	247,605.79	.843	36.5
	Re-Erad.	261,003	3,256,194	6,455	79,218	2,174.07	132,679.52	134,853.59	.517	12.5
	Total	554,828	13,991,373	26,963	225,598	7,768.06	374,691.32	382,459.38	.689	25.2
1937	Initial	152,782	4,876,088	10,037	88,692	392.85	151,107.47	151,500.32	.992	31.9
	Re-Erad.	131,959	1,633,149	1,117	47,631	92.15	79,433.72	79,525.87	.603	12.4
	Total	284,741	6,509,237	11,154	136,373	485.00	230,541.19	231,026.19	.811	22.9
1938	Initial	100,397	2,620,543	2,834	56,717	2,337.85	94,525.59	96,863.44	.965	26.1
	Re-Erad.	142,075	1,624,513	1,697	55,236	975.79	91,044.93	92,020.72	.648	11.4
	Total	242,472	4,245,056	4,531	111,953	3,313.64	185,570.52	188,884.16	.779	17.5
Totals	Initial	1,246,196	46,489,000	68,443	619,288	22,303.70	989,054.47	1,011,358.17	.822	37.3
	Re-Erad.	964,452	14,060,744	16,324	366,115	6,412.83	583,900.77	590,313.60	.612	14.6
	Total	2,210,648	60,549,744	84,767	985,403	28,716.53	1,572,955.24	1,601,671.77	.725	27.4

Basis of costs: See Page 41.

COMPARISON BY STATES OF PER ACRE VALUES FOR RIBES ERADICATION
UNDER C.C.C. PROGRAM IN NORTHEASTERN STATES - 1933 - 1938, INCLUSIVE



COMPARISON BY YEARS OF PER ACRE VALUES FOR RIBES ERADICATION WORK
 UNDER C.C.C. PROGRAM - NORTHEASTERN STATES - 1933-1938, INCLUSIVE



Ribes Eradication Work on National Forests and Parks Under C.C.C. Program

C.C.C. crews have been assigned to Ribes eradication work at Acadia National Park in Maine each year except 1938, since the inauguration of the program in 1933. Similar projects were conducted on the White Mountain National Forest in New Hampshire from 1933-1935, inclusive and during 1938. On the Allegheny National Forest in Pennsylvania similar work was performed during 1934, 1935, and 1938. The initial control project is practically completed at Acadia National Park and about one third of the area has been reworked. With the exception of recent acquisitions, all white pine areas on the White Mountain National Forest have been given initial protection. About 1,500 acres of initial protection work is still needed on the Allegheny National Forest. Several of the areas on this forest have been re-examined for Ribes.

Table 29 shows the results of the Ribes eradication work on the White Mountain National Forest during 1938 and presents totals for all control work performed by the C.C.C. on National Forests and Parks in this region during the period 1933 to 1938, inclusive.

Table 29 - Ribes Eradication Work Performed on National Forests and Parks Under C.C.C. Program in Northeastern States

1938

Project	Type of Erad.	Acreage Worked	Ribes Pulled		Total Man Days	Total Cost (All C.C.C.)	Per Acre		
			Wild	Cult.			Cost	Ribes	Man Days
White Mt. National Forest, N.H.	Initial	724	8,213	85	82	\$ 180.64	.250	11.3	.11
	Re-Erad.	348	2,581	-	67	147.66	.424	7.4	.19
	Total	1,072	10,794	85	149	328.30	.308	10.1	.14

1933-1938, Inclusive

Acadia National Park, Me.	Initial	11,906	362,087	293	7,976	12,536.62	1.95	30.4	.67
	Re-Erad.	8,794	38,204	-	3,396	5,640.89	.641	3.8	.39
	Total	20,700	396,291	293	11,372	18,177.41	.878	19.1	.55
White Mt. National Forest, N.H.	Initial	1,894	633,508	85	2,319	3,411.89	1.80	334.5	1.22
	Re-Erad.	3,593	271,670	-	1,545	2,485.07	.692	76.6	.43
	Total	5,487	905,178	85	3,864	5,896.96	1.07	165.0	.70
Allegheny National Forest, Pa.	Initial	3,267	630,356	22	2,045	3,166.92	.969	192.9	.63
	Re-Erad.	525	41,068	-	435	646.41	1.23	78.2	.83
	Total	3,792	671,424	22	2,480	3,813.33	1.01	177.1	.66
Totals	Initial	17,067	1,625,951	400	12,340	19,115.33	1.12	95.3	.72
	Re-Erad.	12,912	345,942	-	5,376	8,772.37	.679	26.8	.42
	Total	29,979	1,971,893	400	17,716	27,887.70	.930	65.8	.59

Basis of costs: - See Page 41.

These data are included in Tables 26 to 28, inclusive.

Table 30 - Supervision of Ribes Eradication Work Under C.C.C. Program in Northeastern States During 1938.

State	No. Technical Foremen and Checkers	Man Days Worked By Technical Foremen and Checkers	Cost			
			State	W.P.A.	C.C.C.	Total
Maine	18	1,134½	-	-	6,929.96	6,929.96
N.H.	1	21	-	-	58.25	58.25
Vt.	6	403	-	-	2,752.57	2,752.57
Mass.	4	309	818.62	396.95	272.45	1,487.92
R.I.	2	175	-	-	1,275.00	1,275.00
Conn.	7	820	697.08	-	4,745.80	5,442.88
N.Y.	43	2,269	4,862.44	210.66	5,734.70	10,807.70
Penna.	31	1,232	161.40	-	7,494.68	7,656.08
Totals	107	6,368½	6,539.42	607.61	29,263.39	36,410.32

The costs of the technical foremen and checkers employed on Ribes eradication work under the C.C.C. Program are not charged against the project "Ribes Eradication". Their costs, while engaged on blister rust control work, were charged to the project "Eradication Assistants and Checkers". In most instances, the technical foremen directed the work of from three to five C.C.C. crews of six men each.

Nursery Sanitation - C.C.C. Program

Special nursery sanitation work was conducted under the C.C.C. Program during 1938 in only two states - Maine and Pennsylvania. A total of 1,402 wild Ribes were removed from the 850 acres reexamined as a result of 665 man days labor by the C.C.C. personnel. The total cost of this sanitation work was \$954.70, or \$1.12 per acre.

Tables 31 and 32 show the results of the nursery sanitation work, by states, for the calendar year 1938 and the totals for the period 1933-1938, inclusive.

Table 31 - Summary of Nursery Sanitation Work Under C.C.C. Program in Northeastern States During 1938

(All Re-Eradication Work)

State	No. Nurseries Worked	Acreage Worked	No. Ribes Pulled		Total Man Days	Total Cost (All C.C.C.)	Per Acre		
			Wild	Cult.			Cost	Ribes	Days
Maine	1	222	1	-	23	\$38.82	.166	.004	.10
Penna.	2	628	1,401	-	642	917.88	1.46	2.2	.86
Totals	3	850	1,402	-	665	954.70	1.12	1.6	.66

Basis of costs: - See Page 41.

Table 32 - Summary of Nursery Sanitation Work Under C.C.C. Program in Northeastern States, 1933-1938, Inclusive.

Type of Acad.	Acreage Worked	Ribes Pulled		Total Man Days	State	Cost		Per Acre		
		Wild	Cult.			C.C.C.	Total	Cost	Ribes	Man Days
Re-Brad.	691	8	-	81	-	129.82	129.82	.188	.01	.12
Re-Brad.	700	1,600	-	174	417.90	108.00	525.90	.751	2.1	.25
Re-Brad.	3508	23	10	46	-	151.13	151.13	.043	.007	.01
Initial	280	232	47	33	-	65.28	65.28	.233	0.8	.12
Re-Brad.	1779	3,589	4	635	-	1137.68	1137.68	.640	2.0	.36
Total	2059	3,821	51	668	-	1202.98	1202.98	.584	1.9	.32
Re-Brad.	680	17,760	-	182	318.40	255.50	573.90	.911	28.2	.29
Re-Brad.	2409	21,046	-	2098	-	3299.17	3299.17	1.37	8.7	.87
Initial	280	232	47	33	-	65.28	65.28	.233	0.8	.12
Re-Brad.	9717	43,913	14	3216	736.30	5081.30	5817.60	.599	4.5	.33
Total	9997	44,148	61	3249	736.30	5146.58	5882.88	.588	4.4	.32

Basis of costs: - See Page 41.

Blister Rust Canker Elimination Work - C.C.C. Program

Blister rust canker elimination work under the C.C.C. Program in the Northeastern States during 1938 was confined to Acadia National Park where an average of 13 enlisted men and one technical foreman were used for 155 man days during September and October cutting out blister rust infections from scenic white pines along several of the roads and trails in the Park. A total of 5,136 pines were examined and 236 fatally infected trees cut down. In addition 1,927 branch infections and 176 stem cankers were removed from 1,129 other diseased pines. The total cost of this project at Acadia Park was \$354.96.

Table 33 - Blister Rust Canker Elimination Work Under C.C.C. Program in Northeastern States During Period 1933-1938, Inclusive.

Year	Est. Number Pines Examined	No. Fatally Infected Pines Cut Down	No. Infected Pines From Which Cankers Removed	No. Cankers Removed		Total Man Days	Total Cost (All C.C.C.)
				Branch	Stem		
1933	10,000	849	1,951	6,045	286	409	\$ 920.46
1934	23,625	145	581	1,675	66	159	318.85
1935	3,000	325	1,737	7,802	671	352	552.30
1936	16,100	1,341	3,192	8,983	1436	1,000	1,500.00
1937	-	-	-	-	-	-	-
1938	5,136	236	1,129	1,927	176	155	354.96
Totals	57,861	2,896	8,590	26,432	2635	2,075	3,646.57
1933	-	-	-	-	-	-	-
1934	42,563	3,012	9,537	178,874	-	807	1,385.00
1935	207,848	15,435	40,731	180,788	-	1,892	3,307.02
1936	210,102	9,141	24,374	94,774	-	1,529	2,887.31
1937	106,502	720	1,406	6,019	67	336	623.76
1938	-	-	-	-	-	-	-
Totals	567,018	28,308	76,048	458,455	67	4,564	8,203.09
1933	10,000	849	1,951	6,045	286	409	920.46
1934	66,191	3,157	10,118	178,549	66	966	1,703.85
1935	210,848	15,760	42,488	188,590	671	2,244	3,859.32
1936	226,202	10,482	27,566	103,757	1436	2,529	4,387.31
1937	106,502	720	1,406	6,019	67	336	623.76
1938	5,136	236	1,129	1,927	176	155	354.96
Totals	624,879	31,204	84,638	484,887	2702	6,639	11,849.66

Basis of costs:- includes wages of C.C.C. personnel assigned to canker elimination work figured at \$1.00 per eight hour man day plus 35¢ per man day for subsistence in 1933;

Basis of costs continued: 40% in 1934; and 50% during the period 1935-1938, inclusive - cost of crew transportation, and miscellaneous expenses for supplies and equipment.

Pine and Control Area Mapping - C.C.C. Program

Pre-eradication survey work was conducted under the C.C.C. program during 1938 in only two states - Vermont and Pennsylvania. In the latter state the work was performed by 5 C.C.C. checkers and a few C.C.C. enlisted men. The curtailment in the C.C.C. supervisory personnel (blister rust checkers) in 1935 resulted in a corresponding decrease in the volume of mapping work especially in New England and New York. Most of the mapping work in these states since 1935 has been done by the C.C.C. enlisted personnel. However, in Pennsylvania, several checkers have been available for the project each year since 1933. In most instances the work has been restricted to a radius of from 20-25 miles from the C.C.C. camps.

In some cases where C.C.C. personnel has not been available for pre-eradication survey work, control maps prepared by W.P.A. employees have been used for the C.C.C. projects. These control maps are very useful as they enable the foremen to readily locate the bounds of the control areas, and thus limit their activities to crew supervision.

Table 34 shows the results of the pre-eradication survey work, by states, during the calendar year 1938, and the totals for the period 1933-1938, inclusive.

Table 34 Pine and Control Area Mapping Under C.C.C. Program
in Northeastern States
1938

State	No. Towns	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Total Man Days	Total Cost (All C.C.C.)
Vt.	3	15,268	39,078	-	214	860.12
Penna.	59	18,808	-	183	1,375	3,599.20
Totals	62	34,074	39,078	183	1,589	4,459.32

1933-1938, Inclusive

State	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Total Man Days	Cost		
					State	C.C.C.	Total
Maine	296,670	169,667	-	2,446	-	16,956.86	16,956.86
N.H.	81,096	2,740	-	3,963	-	11,168.98	11,168.98
Vt.	87,619	62,593	-	932	189.59	4,800.57	4,990.16
R.I.	106,224	-	-	986	-	7,675.26	7,675.26
Conn.	47,512	93,507	-	339	-	827.60	827.60
N.Y.	73,704	35,495	-	1,221	-	2,388.49	2,388.49
Penna.	254,391	-	1,956	25,226	-	92,669.83	92,669.83
Totals	947,216	364,002	1,956	35,112	189.59	136,487.59	136,677.10

Basis of costs: Includes actual salaries and transportation expenses of C.C.C. technical foremen and checkers assigned to mapping project - cost of enlisted men's time figured on same basis as listed for Table 33 - cost of mapping supplies.

Table 35 - Total Expenditures, By Cooperating Agencies, Under C.C.C.
Program in Northeastern States.

1938

State	State Funds	C.C.C.	W.P.A.	Totals
Maine	-	44,223.17	-	44,223.17
N.H.	-	386.55	-	386.55
Vt.	-	14,334.93	-	14,334.93
Mass.	818.52	9,515.37	396.95	10,730.84
R.I.	-	6,768.20	-	6,768.20
Conn.	697.05	22,133.90	-	22,830.95
N.Y.	8,176.08	52,723.68	210.56	61,110.32
Penna.	161.40	78,947.57	-	79,108.97
Totals	9,853.05	229,088.37	607.51	239,498.94

1933-1938, Inclusive.

State	State Funds	P.W.A.	B.P.I.	W.P.A.	C.C.C.	Totals
Maine	135.00	-	-	-	313,850.97	313,985.97
N.H.	1,241.28	-	-	-	147,013.75	148,255.03
Vt.	1,548.49	-	85.50	-	88,834.64*	90,468.63
Mass.	1,027.26	-	-	948.45	55,834.25	57,809.96
R.I.	15.00	-	-	-	104,941.98	104,956.98
Conn.	3,616.78	244.36	1,339.60	-	147,829.14**	152,829.88
N.Y.	59,520.59	-	-	300.80	661,702.19	721,523.58
N.J.	-	-	-	-	346.50	346.50
Penna.	2,056.24	-	-	-	681,974.52	684,030.76
Totals	69,160.64	244.36	1,425.10	1,249.25	2,202,127.94	2,274,207.29

* In addition, \$203.33 C.C.C. funds were expended under the P.W.A. Program.

** An additional \$218.40 C.C.C. funds were expended under the E.R.A. Program.

Table 36 - Total Cooperative Expenditures, By Projects, Under C.C.C. Program
in Northeastern States During Period 1933-1938, Inclusive.

State	Period	Eradication	Eradication Assistants and Checkers	Nursery Sanitation	Treatment Diseased Pines	Field Data		Total
						Mapping	General	
Maine	1938	36,901.43	6,929.96	36.82	354.86	-	-	44,223.07
	1933-38	219,820.28	73,045.54	129.82	3,646.57	16,956.86	386.90	313,985.97
N.H.	1938	328.30	58.25	-	-	-	-	386.55
	1933-38	99,570.85	37,516.20	-	-	11,168.98	-	148,255.03
Vt.	1938	10,722.24	2,752.57	-	-	860.12	-	14,334.93
	1933-38	66,576.20	18,376.37	525.90	-	4,990.16	-	90,468.63
Mass.	1938	9,242.92	1,487.92	-	-	-	-	10,730.84
	1933-38	46,870.11	10,879.85	-	-	-	60.00	57,809.96
R.I.	1938	5,493.20	1,275.00	-	-	-	-	6,768.20
	1933-38	73,784.93	23,283.35	151.13	-	7,675.26	62.51	104,897.18
Conn.	1938	17,388.10	5,442.86	-	-	-	-	22,830.96
	1933-38	106,976.15	41,964.48	1,202.96	-	327.60	1,858.69	152,829.28
N.Y.	1938	50,307.62	10,807.70	-	-	-	-	61,115.32
	1933-38	540,497.84	177,912.50	573.90	-	2,388.49	150.35	721,423.08
N.J.	1938	-	-	-	-	-	-	-
	1933-38	346.50	-	-	-	-	-	346.50
Penna.	1938	58,500.36	7,656.06	917.88	-	3,599.20	8,435.48	70,109.58
	1933-38	447,228.91	124,194.28	3,299.17	8,203.09	92,669.63	8,435.48	684,050.76
Totals	1938	188,884.16	36,410.32	954.70	354.96	4,459.32	8,435.48	239,409.94
	1933-38	1,601,671.77	607,171.57	5,882.88	11,849.66	136,677.13	10,954.23	2,374,207.31

BLISTER RUST CONTROL ACTIVITIES AND ACCOMPLISHMENTS UNDER THE WPA PROGRAM
IN THE NORTHEASTERN STATES

Allotments

WPA funds totaling \$2,950,843.65 have been allocated for blister rust control work in the Northeastern States during the period July 25, 1935 to February 28, 1939. The allotments by states were as follows:

Maine.....	\$488,686.49
New Hampshire.....	475,508.44
Vermont.....	295,482.72
Massachusetts.....	343,516.97
Rhode Island.....	34,369.52
Connecticut.....	78,304.27
New York.....	865,420.34
New Jersey.....	7,538.49
Pennsylvania.....	348,537.41
Sub-Total.....	2,937,063.65
Administrative.....	13,780.00
Grand Total.....	\$2,950,843.65

The figures listed above represent the gross amount of money provided through various allotments to each state. The original allotments were made July 25, 1935. On June 10, 1936, a recision was made in each state. The withdrawals were largely offset July 3, 1936 through increased allotments by the President. Again on July 23 and September 15, the President awarded additional money. Also during 1936, the Bureau, with the approval of the WPA, made certain adjustments in funds between states on August 24, November 27 and December 31. Further adjustments and increases were made during calendar years 1937 and 1938. Table 58 gives detailed information on the various allotments to the states. The piecemeal procedure in allotting funds made it somewhat difficult in planning field activities, but did not cause any serious complications.

Purpose of Allotments

The specific objectives have been outlined as follows:

1. To protect our national resources of white pine from the blister rust by the systematic, thorough, and efficient elimination of Ribes from definite areas.
2. To employ in the locality of the work as many of the persons on public relief as may effectively be used.
3. To distribute opportunities for work as widely, geographically, and as equitably as may be practicable.
4. To aid in all possible ways the accomplishment of the other purposes of the Emergency Relief Appropriation Acts of 1935-1938, inclusive.

Economic and Social Value of Project

The white pine crop in the Northeastern States comprises over 7½ million acres and has a normal commercial value of \$815,000,000. Millions of white pines are also being planted each year in connection with reforestation activities. The social, recreational, and watershed protection value of this crop is likewise of tremendous importance.

The WPA program has played an important part in the protection of this valuable pine crop from blister rust, since under this program 2,292,421 acres (containing 1,033,733 acres of white pine) have been cleared of Ribes bushes, the alternate host of the disease. Thousands of acres of pine reproduction have been protected, thus assuring the development of future commercial stands. The program has made possible the systematic working of large areas, rather than individual units. It has also permitted the application of control measures on lands where such work was urgent, rather than basing the selection on local cooperation. It has been possible to work many remote areas, also tracts containing an abundance of Ribes, where the cost of control had prevented prior application of protection measures. This control work has served to eliminate many sources of infection that otherwise would have persisted. The maintenance of protection on areas initially worked several years ago was also materially advanced by the WPA program, particularly in townships where such activities would have been impossible without emergency funds.

The expenditure to December 31, 1938 of \$2,862,505.81 WPA money (exclusive of administrative funds) on blister rust control in the rural portions of the Northeastern States has given 9,673 security-wage workers 5,303,953 man hours of useful self-respecting employment, directly benefiting persons who would otherwise have been on town relief, especially in communities where there was a lack of other projects of a permanent public benefit. Our project was especially adapted to the employment of relief labor. It provided healthful employment where skill, except for supervision, was not necessary. The location of the work was such, that in most instances, transportation was not required in getting the men to and from work. In fact, the entire cost to the Government for transporting security-wage workers up to December 31, 1938 amounted to only \$44,660.63. Most important of all salaries and wages constituted 95.0 percent of the entire cost of the program. The expenditures have also materially aided in stimulating local business by increasing the amount of money in circulation.

Estimating that each of the 9,783 WPA employees that have worked on our project had three dependents, a total of 39,132 individuals were, at some time during the program, being fed, sheltered and clothed from wages earned in connection with this work. When the project was initiated very acute conditions in many communities were brought to our attention. Suffering from hunger was commonly noted. It was a frequent occurrence for workers to report for duty with little or no breakfast and without lunch or funds to provide one. The elimination of these conditions, which disappeared gradually as the workers received reimbursement for their services, had a social value impossible to estimate.

The successful performance of Ribes eradication work required the closest cooperation between the individual members of the field units. It has been the constant aim of the district leaders and the local supervisors to develop this cooperative spirit and their efforts have met with unusual success. This has not only measurably increased the efficiency of the work, but the training the workers have received in this cooperative effort should have a helpful effect upon them as members of the community in which they reside.

One of the outstanding indirect accomplishments of this work has been to demonstrate to many individuals that the Bureau requires of its personnel full attention to the duties at hand. Many of the laborers originally had the idea that public work in general was not too laborious, not too important perhaps. They have gained a far different understanding as a result of their experience on the blister rust control project. Workers who have been unwilling to carry out instructions have been dealt with summarily to the credit of public work in general.

The enforcement of regulations forbidding smoking while working in the woods has also had a marked effect on the men. It has effectively demonstrated the need for the exercise of care to prevent the destruction of our forests through the careless use of smoking materials.

The interest displayed by the average worker has been surprisingly keen, particularly when the foreman in charge has successfully stimulated a competitive spirit among the members of his crew.

Over 9700 men have received training in Ribes eradication work, and many of these persons will be available for similar work in the future. The training should also enable many of these men to maintain control of blister rust on their own properties.

Responsibilities and Direction of Work

The WPA funds with which we are concerned were specifically allocated to the United States Department of Agriculture, the Bureau of Entomology and Plant Quarantine, for expenditure by the Division of Plant Disease Control. The work is handled directly by the Department cooperating with the State WPA officers for labor assignments and with the U. S. Treasury for accounting and disbursing.

The WPA blister rust control work in each state is performed under the general plan embodied in the Memoranda of Understanding existing between the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture and cooperating States, and is fitted in with other control activities in the states so as to make a unified, coordinated work program. The Bureau, however, carries direct responsibility for both the fiscal and the technical phases of the work. The state forester or other collaborator in the state is consulted as to policies and is kept fully advised at all times. The state official administering the state plant pest laws enforces such state regulations as may be available for the effective prosecution of blister rust control work, and deputizes the cooperative employees to permit the destruction of such pine and Ribes as may be necessary and as provided by state laws. Federal money cannot be used to pay compensation for plants destroyed.

The Senior Pathologist of the Regional Office was made "Project Manager" for the WPA blister rust control program in the Northeastern States and was delegated the funds allotted for the respective nine states in the region. He was also given authority to obtain services and supplies and to incur expenditures under each state allotment. Letters of authorization were issued by the Bureau to him and to each state leader. These men in turn issued monthly sub-letters of authority where necessary to employees working under their direction.

Field Supervision

The successful results under the WPA program can be attributed in a large extent to the availability of a trained force of state and federally appointed district leaders and supervisors to direct the project in each district. Through the services of these men, it was possible to get the WPA employees working in the field within a few days after funds became available. These leaders were accustomed to supervising large groups of men and had little difficulty in adapting themselves to the WPA program. Most of the district leaders (the number varied from 20 to 27) have Civil Service status. All of these men were allowed expenses when

away from headquarters. Supervisors were used only during 1935 and 1936 when the employment of several thousand laborers made it necessary to provide our regular district leaders with assistants. The supervisors (maximum number 82) were paid \$135 per month plus reimbursement on a 5¢ per mile basis for use of their personally-owned machines on official work. The supervisors were not granted any per diem allowance and were employed only during the Ribes eradication season, except in a few instances where they were retained on mapping projects during the winter of 1935-1936.

Qualifications Established for Labor

In submitting requisitions for WPA labor in the field, the following qualifications were established:

1. Must be physically able to work all day.
2. No serious defects of eyesight.
3. Stable personality, good habits, good conduct, thoroughness, industriousness, reliability and willingness.

No restrictions were placed on the age of the workers, except that WPA regulations prevented the employment of any persons under 18 years of age. Regardless of relief status or any other consideration, WPA laborers were released when unable or unwilling to give full effort and value. The cooperation of the NRS and WPA offices usually prevented our project from being supplied with men obviously unsuited for the work. It is estimated that about 10 percent of the workers in 1935 had previous blister rust control experience, while during 1936 to 1938 at least 50 percent were experienced. In the field, only two classes of labor were used during the Ribes eradication seasons - unskilled laborers and crew foremen.

Source of Labor

All labor was secured, prior to August 13, 1936, direct from the local offices of the National Reemployment Service, at least 90 percent of the workers being taken from certified relief rolls. One of the outstanding experiences in the entire WPA program has been the evidence of mutual cooperation between the NRS and our district leaders. The closest cooperation prevailed from the inception of the work. It was through the complete cooperation of the NRS that, at the beginning of the program, we were able to have workers in the field within a few days after the release of the allotments. This was a real accomplishment; when it is appreciated, that in most sections at that time not a single copy of the necessary WPA and NRS employment record forms had been received. The local offices of the NRS cooperated with the district leaders 100 percent. The facilities of these agencies were seldom such that they could keep their records up to date. As soon as this fact was fully appreciated, our leaders immediately offered to interview listed men for the purpose of ascertaining their employment status at the time. It was only through the adoption of this procedure that we were able to procure the workers as needed. It also eliminated the needless preparation of USES 325 forms in cases where the registrants were employed, but had not notified the NRS to that effect.

During the period August, 1936 to July, 1937, the desired labor was obtained through the district W.P.A. offices. With few exceptions, good cooperation was evidenced at all times, but the service was not as prompt as under N.R.S.

Since July, 1937, all the W.P.A. administrative activities have been centralized at the respective state headquarters, which necessitated the submission of all labor requisitions to these offices. This procedure materially delayed the assignment of workers, and seriously handicapped the control work in some sections of the Northeast.

The 90-10 ratio required between relief and non-relief workers up to April 15, 1937 was consistently maintained in each state, except during the period June 1 to August 28, 1936 when 406 workers were exempted from the required ratio in Maine, New Hampshire and Vermont. Since April 16, 1937, W.P.A. regulations have required that at least 95% of all employees be taken from relief rolls. This ratio has been maintained in all states, except Connecticut and New Jersey. As less than 20 W.P.A. laborers were employed on the projects in each of these states, exemptions from the required 95-5 ratio were permitted in accordance with Sections 2 and 8 of W.P.A. Administrative Order No. 54.

Personnel

Funds for blister rust control work under the W.P.A. Program were first made available July 25, 1935, and labor was being employed by July 29. During the first half of August, 1935, a total of 1,800 persons were on the W.P.A. pay-rolls. For the next two and a half months, the W.P.A. personnel averaged 2,955 employees. An average of 365 W.P.A. workers were employed chiefly on pre-eradication survey work during November and December, 1935. The average number of W.P.A. employees from 1936 to 1938 were as follows:

Period	Major Field Project		Average No. W.P.A. Employees
	Pine & Control Area Mapping	Ribes Eradication	
January 1 to April 30, 1936	X		418
May 1 to September 30, 1936		X	4,146
October 1 to December 31, 1936	X		391
January 1 to April 30, 1937	X		343
May 1 to September 30, 1937		X	819
October 1 to December 31, 1937	X		578
January 1 to April 30, 1938	X		378
May 1 to September 30, 1938		X	879
October 1 to December 31, 1938	X		466

A peak number of 4,457 workers were employed from July 1-15, 1936, and the average number of employees was 1154 per semi-monthly period for the entire program to December 31, 1938.

Table 37 - Employment on Blister Rust Control Under W.P.A. Program
Calendar Year 1938

State	Security Wage Workers						Appointees			All Employees		
	Relief			Non-Relief								
	Man Hours	Man Mos.	Man Yrs.	Man Hours	Man Mos.	Man Yrs.	Man Hours	Man Mos.	Man Yrs.	Man Hours	Man Mos.	Man Yrs.
Maine	134,791	1,047.8	87.3	-	-	-	3,072	16.0	1.3	137,863	1063.8	88.6
N.H.	135,031	1,135.2	94.6	-	-	-	5,222	27.2	2.3	140,253	1162.4	96.9
Vt.	100,535	729.1	60.8	-	-	-	3,456	18.0	1.6	103,991	747.1	62.4
Mass.	116,868	913.3	76.1	-	-	-	4,224	22.0	1.8	121,092	935.3	77.9
R.I.	7,369	59.3	5.0	-	-	-	1,056	5.5	0.5	8,425	65.3	5.4
Conn.	20,563	171.1	14.3	-	-	-	2,285	11.9	1.0	22,848	183.0	15.3
N.Y.	233,847	1,824.6	152.2	-	-	-	8,544	44.5	3.7	242,391	1871.1	155.9
N.J.	-	-	-	-	-	-	19	0.1	0.0	19	0.1	0.0
Penna.	76,948	779.6	65.0	480	5.0	0.4	4,051	21.1	1.8	81,479	805.7	67.2
Sub-Totals	825,952	6,662.5	555.3	480	5.0	0.4	31,929	166.3	13.9	858,361	6853.8	569.8
Admin.	-	-	-	-	-	-	4,665	24.3	2.0	4,665	24.3	2.0
Totals	825,952	6,662.5	555.3	480	5.0	0.4	36,594	190.6	15.9	863,026	6858.1	571.8

July 29, 1935 to December 31, 1936

State	Security Wage Workers						Appointees*			All Employees		
	Relief			Non-Relief								
	Man Hours	Man Mos.	Man Yrs.	Man Hours	Man Mos.	Man Yrs.	Man Hours	Man Mos.	Man Yrs.	Man Hours	Man Mos.	Man Yrs.
Maine	861,699	6,701.0	558.4	55,891	435.6	36.3	44,909	233.9	19.5	962,499	7,370.4	614.2
N.H.	788,579	6,308.7	525.7	116,540	916.6	76.3	48,595	253.1	21.1	953,714	7,477.4	623.1
Vt.	599,356	4,510.9	375.9	40,175	312.2	26.0	31,584	164.5	13.7	671,115	4,987.6	415.6
Mass.	511,754	3,985.4	332.1	8,821	68.7	5.7	38,266	199.3	16.6	558,841	4,253.4	354.4
R.I.	62,450	494.0	41.2	3,689	28.4	2.4	2,400	12.5	1.0	68,489	534.9	44.6
Conn.	133,201	1,047.0	87.2	1,830	14.2	1.2	7,335	38.2	3.2	142,366	1,099.4	91.6
N.Y.	1,453,885	11,319.3	943.3	33,600	300.5	25.0	86,151	448.7	37.4	1,578,636	12,068.5	1005.7
N.J.	10,870	86.7	7.2	-	-	-	2,285	11.9	1.0	13,155	93.6	7.7
Penn.	594,496	5,156.9	429.7	22,168	184.2	15.3	40,224	209.5	17.5	656,887	5,550.6	459.5
Sub-Totals	5,016,289	39,609.9	3300.7	287,664	2259.3	183.2	301,749	1571.6	131.0	5,605,702	43,440.8	3613.9
Admin.	-	-	-	-	-	-	8,409	43.8	3.7	8,409	43.8	3.7
Totals	5,016,289	39,609.9	3300.7	287,664	2259.3	183.2	310,158	1615.4	134.7	5,614,111	43,484.6	3617.6

* Includes time paid supervisors during 1935 and 1936 for all accumulated leave taken after completion of their field services.

Table 38 - Peak Employment, Man Year, and Man Month Cost of Blister Rust Control Work Under W.P.A. Program in Northeastern States.

Calendar Year 1938

State	Peak Employment		Man Year Cost		Man Month Cost		
	No. Men	Period	Over-All (1)	Net (2)	Over-All	Net	Operating Cost
Maine	165	8/16-8/31/38	749.99	761.16	62.46	63.42	5.47
N.H.	166	9/1-9/15/38	704.10	721.22	58.70	60.10	3.26
Vt.	130	"	721.87	739.47	60.18	61.66	3.87
Mass.	174	"	882.74	903.62	73.52	75.29	4.90
R.I.	16	7/16-7/31/38	801.87	832.06	67.54	73.75	0.37
Conn.	34	6/16-6/30/38	780.04	834.58	65.22	69.75	3.82
N.Y.	288	"	828.01	848.14	68.99	70.67	3.03
Penna.	117	9/1-9/15/38	727.30	747.32	60.66	62.29	4.29
Sub-Totals	"	"	777.23	796.67	64.78	66.40	3.95
Admin.	"	"	3,206.51	"	263.83	"	65.44
Totals	"	"	785.65	808.14	65.48	67.35	4.17

July 29, 1935 to December 31, 1938

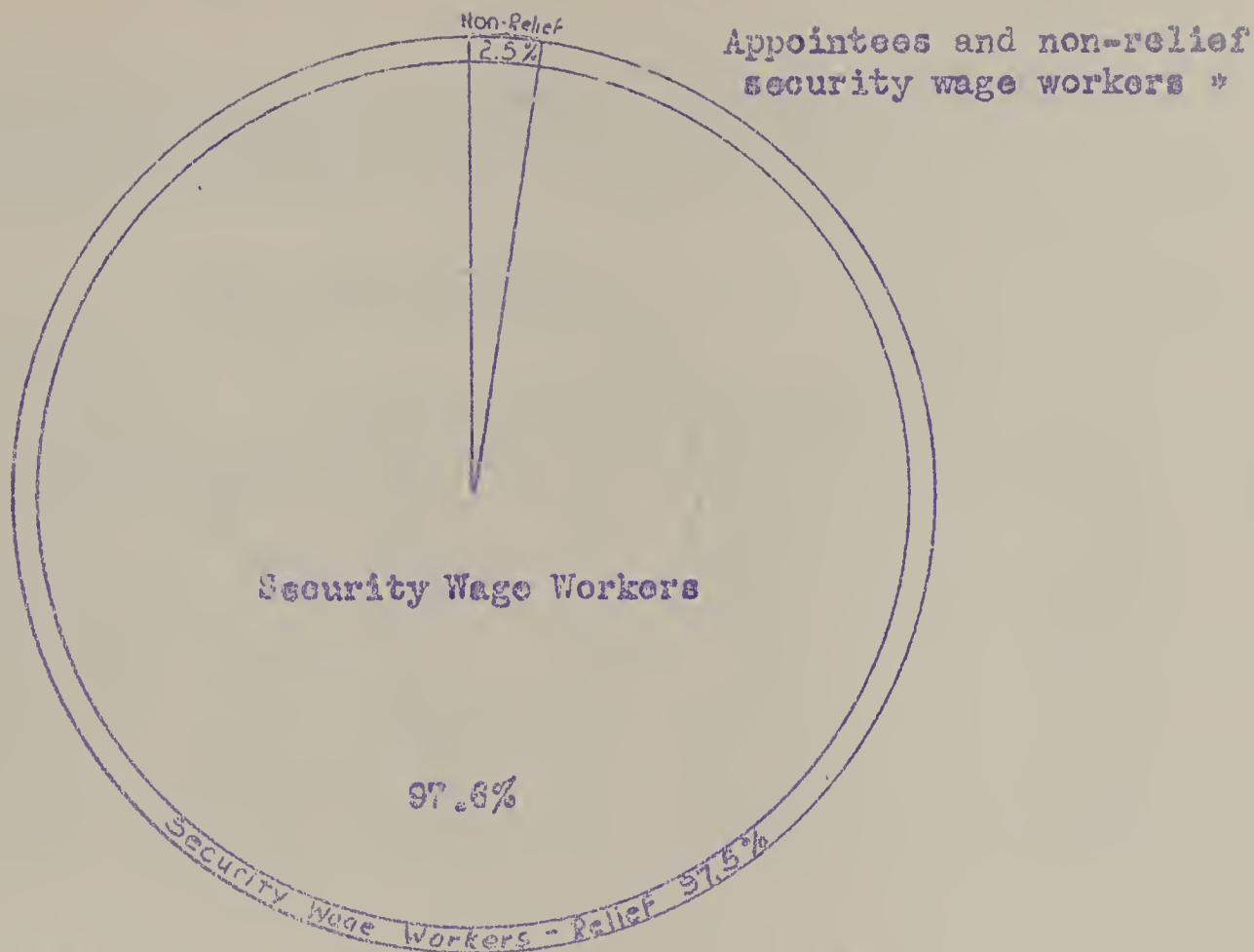
State	Peak Employment		Man Year Cost		Man Month Cost		
	No. Men	Period	Over-All (1)	Net (2)	Over-All	Net	Operating Cost
Maine	741	8/16-8/31/38	773.67	804.20	64.89	67.02	4.86
N.H.	906	6/1-6/15/38	743.30	789.35	61.94	64.11	3.43
Vt.	332	8/16-8/31/38	693.74	717.39	57.81	59.78	3.70
Mass.	327	6/1-6/15/38	931.31	977.08	77.60	81.41	4.72
R.I.	64	"	769.10	786.74	64.13	65.66	1.05
Conn.	115	9/1-9/15/38	831.62	861.73	69.29	71.78	5.95
N.Y.	1,184	6/1-6/15/38	839.04	871.45	69.92	72.62	1.91
N.J.	14	8/16-8/31/38	690.61	1,014.36	74.07	84.24	3.17
Penna.	608	7/16-7/31/38	737.54	766.55	61.46	63.87	3.47
Sub-Totals	"	"	790.77	820.46	65.89	68.37	3.45
Admin.	"	"	3,249.83	"	274.53	"	83.95
Totals	"	"	793.28	823.91	66.10	68.66	3.53

(1) Based on total expenditures divided by number of security-wage and appointee man years.

(2) Based on total expenditures divided by number of security-wage man years.

Data for Massachusetts include Cambridge, Massachusetts regional office employment and expenditures.

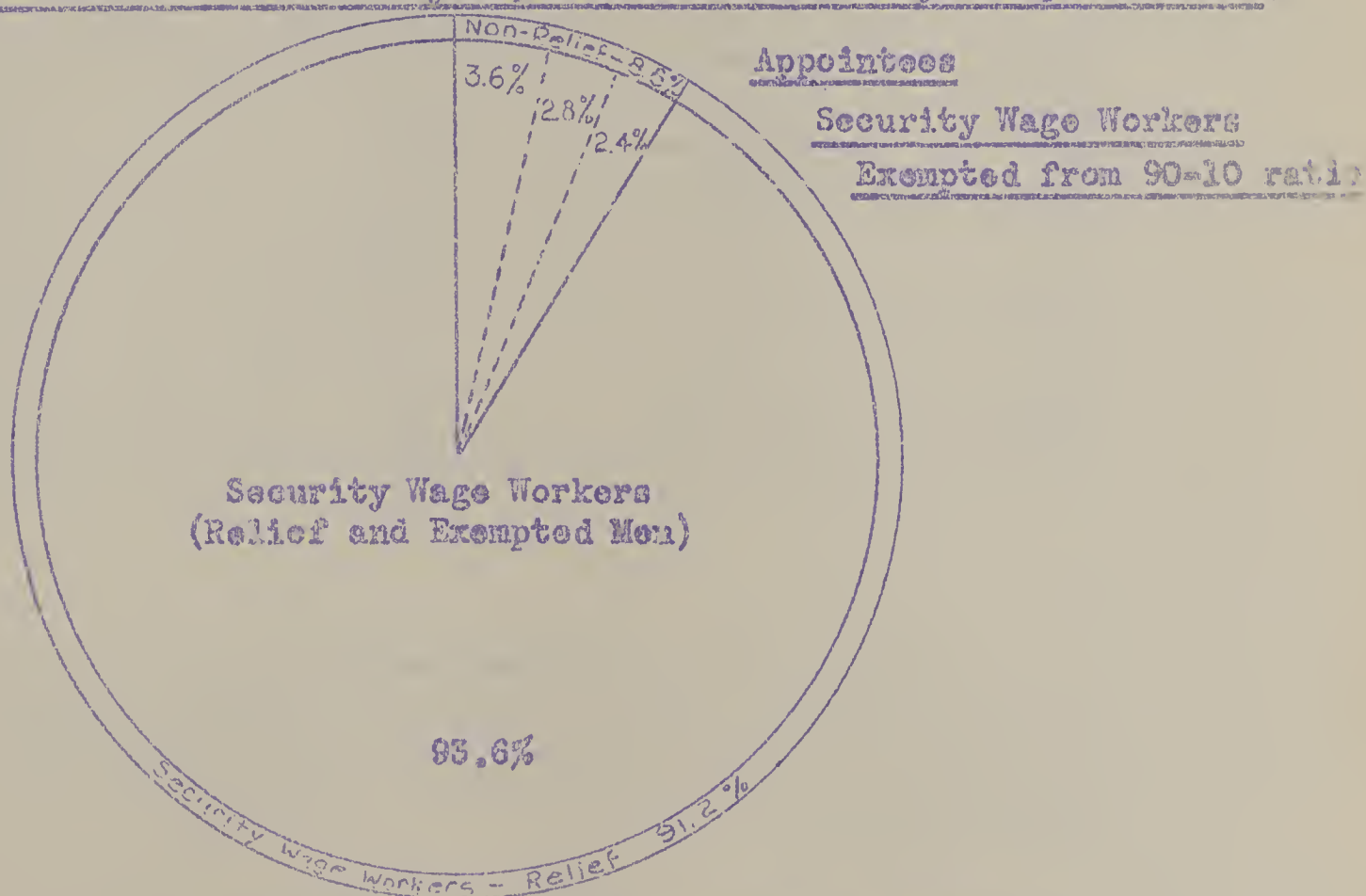
Personnel by Employment Classes on Blister Rust Control
WPA Program in Northeastern States - Calendar Year 1938



Total Man Months of Employment - 6,833.8

(*Appointees 2.4% and non-relief security wage workers 0.1%)

Personnel by Employment Classes on Blister Rust Control
WPA Program in Northeastern States July 29, 1935 - December 31, 1938, Inclusive.



Total Man Months of Employment - 43,440.8

(Includes 406 men exempted from 90-10 ratio in three states)

Table 39 - Man Months of Employment by Relief and Non-Relief Employees; and the Status in Maintaining Required Ratio.

Calendar Year 1936

State	Total Man Months Employment		Man Months Surplus or Deficit Over Required Ratio
	Relief	Non-Relief	
Maine	1,047.8	16.0	+ 39.1
N.H.	1,135.2	27.2	+ 32.5
Vt.	729.1	18.0	+ 20.4
Mass.	913.3	22.0	+ 26.1
R.I.	59.8	5.5	- 2.4
Conn.	171.1	11.9	- 2.9
N.Y.	1,826.6	44.5	+ 51.6
Penna.	779.6	26.1	+ 14.9
Totals	6,662.5	171.2	+179.6

July 29, 1935 to December 31, 1936

State	Total Man Months Employment		Man Months Surplus or Deficit Over Required Ratio
	Relief	Non-Relief	
Maine	6,701.0	669.4	- 37.7
N.H.	6,808.7	1,158.7	- 588.2
Vt.	4,510.9	476.7	- 59.9
Mass.	3,985.4	268.0	+ 84.9
R.I.	494.0	40.9	+ 8.6
Conn.	1,047.0	52.4	+ 49.4
N.Y.	11,319.3	749.2	+ 314.6
N.J.	86.7	11.6	- 3.8
Penna.	5,158.9	393.7	+ 36.1
Totals	39,609.9	3,830.9	- 196.1

Excluding the 1,020.9 man months worked by 406 non-relief laborers exempted from the 90-10 ratio during the period June 1 to August 20, 1936, there actually has been a surplus of 824.8 man months of relief employment over the required ratio for the entire program.

W.P.A. PERSONNEL ON BLISTER RUST CONTROL IN NORTHEASTERN STATES
(July 29, 1935 to December 31, 1938)

4000

3500

3000

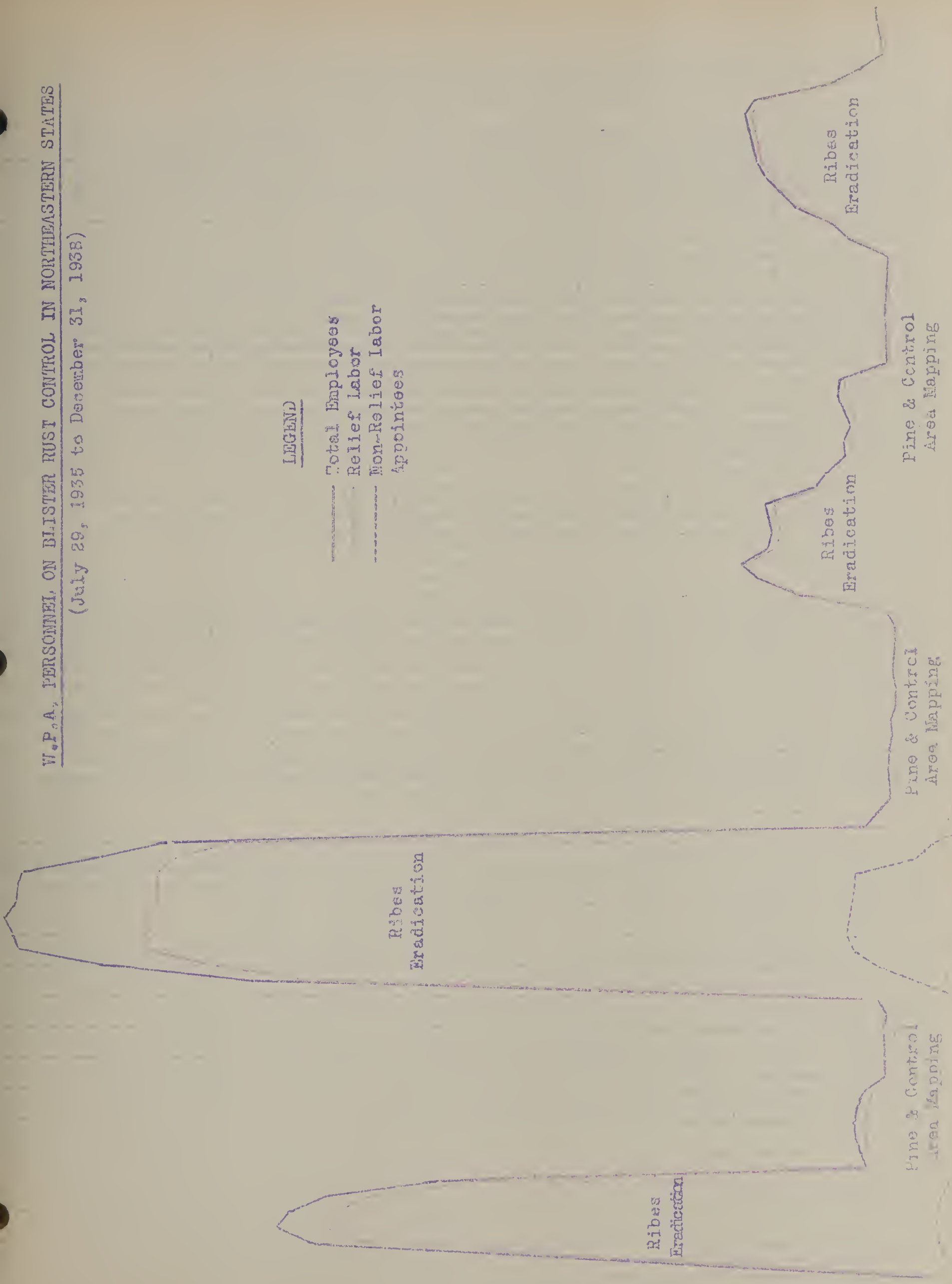
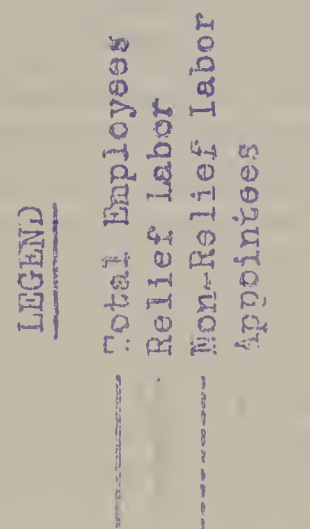
2500

2000

1500

1000

500



Hours of Work and Wage Scales

At the beginning of the WPA program, the maximum hours of work per month permitted WPA laborers on blister rust control was 130. The working schedule was established at twenty $6\frac{1}{2}$ -hour days per month. This arrangement was continued until March 16, 1936, at which time the maximum number of hours per month was reduced to 128 and the working schedule changed to 16 eight-hour days per month.

After conducting the program for about two months, we were advised that the wage scales would have to be approved by the respective state administrators. As a result of personal conferences with these men, uniform state rates, based on the highest county rate in the district where the project was being operated, were approved for each state. About July 1936, it was necessary to again contact the state administrators in order to obtain their approval of rates based on prevailing wages. The continuance of uniform state rates was approved in all cases. In four states, Maine, Connecticut, New York and Massachusetts, the 128-hour per month basis was continued, but it was established as follows in the other states: New Hampshire, 125; Vermont, 138; Rhode Island, 123; and Pennsylvania, 105.

During 1937, the State W.P.A. Administrators in New Hampshire and Connecticut revised the hours of work and the wage scale for our projects in these two states. The maximum number of hours per month was reduced from 128 to 120 in both instances.

In New Hampshire, the administrator approved the continuance of uniform rates until October 30, 1935. By that time we had completed our eradication work for the season. During the fall and winter months, county rates were established for unskilled workers, but a statewide rate was continued for the skilled laborers on our mapping project which employed only skilled men. The uniform state rate for skilled labor was continued, but during May 1 - July 31, 1936, it was necessary to pay unskilled workers on the basis of county rates. These local rates were abandoned August 1, 1936 and state rates approved for all classes of employees. On October 1, 1938 all classes of labor were placed on the county rate basis, and this procedure has continued since that time.

Uniform state wide rates were used in Maine until September 1938, at which time county rates were established for all classes of labor. However, in the case of crews working inter-county, permission was given to pay the highest rates in the group of counties in which the men would be employed.

The only other exception to the uniform state rates occurred November 15, 1936 in Pennsylvania where the state administrator required a reduction of the hours to 96 per month in a unit of four counties (Bradford, Wyoming, Centre and Susquehanna) situated in the northeastern part of the state, a considerable distance from the other contiguous counties in which the project was being conducted. As only one new district was involved in these special rates, it did not complicate our office procedure to any appreciable extent. Certain other changes in hours and rates were made October 1, 1938. These and the hours and rates for the other states are shown in the Table 40.

Table 40 - Approved W.P.A. Wage Scales For Federal Blister Rust Control Work in Northeastern States During Calendar Year 1938

State	Period	Maximum Hours Per Mo.	Counties in Which Rates Applied	Monthly Wage Rate		
				Unskilled	Intermediate	Skilled
Me.	1/1-8/31/38	128	All	\$52.48	60.16	75.52
	9/1-12/31/38	130	Cumberland	52.00	61.10	76.40
		130	Androscoggin and Penobscot	48.10	55.90	70.50
		130	Kennebec, Knox, Oxford, Sagadahoc, Washington and York	44.20	50.70	63.70
		130	Franklin, Hancock, Lincoln, Piscataquis, Somerset and Waldo	42.90	49.40	61.40
N.H.	1/1-9/30/38	120	All	48.00	-	63.60
	10/1-12/31/38	-	Belknap, Cheshire, Coos, Grafton, Strafford, Sullivan and Rockingham except towns of Londonderry, Derry, Salem and Windham	44.00	-	63.00
		116	Carroll	40.60	-	55.60
		120	Merrimack	48.00	-	62.40
		130	Hillsboro County and towns in Rockingham County excepted above	52.00	-	72.40
		150	Special order for foremen in Carroll County	-	-	82.40
Vt.	Year	138	All	48.30	(136 hrs) 54.40	69.00
Mass.	Year	128	All	60.50	71.50	81.50
R.I.	Year	123	All	55.35	65.19	85.20
Conn.	Year	120	All	54.00	64.80	85.20
N.Y.	Year	128	All	60.48	71.36	81.28
Pa.	1/1-9/30/38	96	Clarion, Jefferson, Forest, Bradford, Potter, Tioga, Susquehanna and Wayne	48.40	55.00	68.00
		108	Clearfield	52.80	60.60	70.60
	10/1-12/31/38	86	Clarion, Jefferson, Forest, Bradford, Potter, Tioga, Susquehanna, Wayne, Armstrong, Venango, McKean, Warren and Clinton.	48.40	55.00	68.00
		106	Clearfield, Butler, Monroe, Centre, and Westmoreland.	52.80	60.60	70.60
		114	Blair and Cambria	57.20	66.00	76.00
		120	Luzerne	60.50	71.50	80.50
		-	-	-	-	-

In Pennsylvania, no work was performed prior to October 1, 1938 in the counties of Armstrong, Venango, McKean, Warren, Clinton, Monroe, Butler, Westmoreland, Center, Blair, Cambria and Luzerne.

Making Up of Lost Time by W.P.A. Labor

During the first few months of the program, considerable confusion existed as to whether or not it was necessary to make up credited time that had been lost due to inclement weather. Effective January 11, 1936, six states went on record as not requiring such lost time to be made up, but three states (New Hampshire, Massachusetts, and Rhode Island) continued to require the making up of such lost time. A W.P.A. regulation issued March 11, 1936 made it compulsory to make up credited lost time in all states. This procedure greatly complicated our record work, as it was necessary to determine for each payroll the amount of credited time and the amount of make up time. This condition continued until June 16, 1936 when instructions were issued that the W.P.A. labor would only be paid for time actually worked. In accordance with W.P.A. Administrative Order No. 56, dated May 18, 1937 employees have since that time been permitted to make up time lost due to weather conditions, sickness or injury, and temporary interruptions in the project due to circumstances beyond their control.

Transportation

Each district leader has been provided with a Government car for use in connection with his supervisory activities. Most of these automobiles are of the coach model type and were purchased prior to the W.P.A. Program. However, 15 sedan delivery trucks were purchased from W.P.A. money during the fall of 1936 and assigned to some of the district leaders whose cars were no longer serviceable for long trips. Instead of turning in their old automobiles, the cars were assigned to some of the W.P.A. supervisors during 1936 and have been used for transporting W.P.A. crews since that time. No Government trucks have been purchased for transporting W.P.A. laborers, because of the seasonal nature of our project. However, during December, 1937, arrangements were made to obtain 16 half-ton Dodge trucks, with pick-up bodies, from the Bureau of Entomology and Plant Quarantine Office at Greenfield, Massachusetts. These trucks were available for transfer due to the curtailment of the gypsy and brown-tail moth control project under the W.P.A. Program.

All W.P.A. workers on our project travel to and from work on their own time. Instructions have been issued to the supervisory force to provide transportation where the daily cost to the worker exceeded car fare, normally 20 cents per day. A survey made in August, 1936 showed that 42 percent of the W.P.A. personnel employed at that time rode to and from work at their own expense, 38 percent traveled in cars provided at Government expense, 19 percent used automobiles furnished by towns and counties, while only 1 percent walked. The entire cost to the Government for transporting security wage workers up to December 31, 1938 amounted to \$44,660.63. Of this total, only \$5,037.77 was expended during the calendar year 1938.

Whenever transportation was necessary at Government expense, one of the following procedures was authorized:

1. Personally-owned cars at rate of 4 cents per mile for security-wage workers, and 5 cents per mile for appointees.
2. Personally-owned cars on owner-operator basis. This procedure proved very satisfactory, but was limited to cars owned and operated by relief security wage workers. Under this procedure, the owner was paid not only for his personal services on the work, but also for the use of his car.

3. Trucks hired on a contractual basis, where the total payments under one agreement did not exceed \$300.00. Only a few contracts of this type were made.

Safety Measures

Copies of all W.P.A. instructions concerning safety regulations have been furnished the supervisory personnel in the Northeastern States and the field men instructed accordingly. Each crew, consisting of 3 to 6 men, is provided with a first-aid kit and the foreman is responsible for applying any first-aid measures that may be required. Considerable confusion existed as to the application of the automobile regulations and the inspection of the machines by W.P.A. officials. Only a few inspections have been made. Red flags and flares have also been provided for all cars transporting W.P.A. workers on our project. Experienced drivers have been selected to operate the Government cars assigned to project, and all of these drivers have been furnished with Government operators' licenses.

Injuries and Compensation to W.P.A. Workers

During the period July 29, 1935 to December 31, 1938, a total of 9,673 security-wage workers have been employed for 5,303,952 man hours on the W.P.A. blister rust control activities in the Northeastern States. In spite of the large force of men employed, only 504 alleged injuries were reported up to December 31, 1938. The following summary shows a classification of the alleged injuries sustained during the entire program.

Table 41 - Classification of Alleged Injuries Sustained on W.P.A. Blister Rust Control Project in Northeastern States
(By States)

No. Alleged Injuries, By Classes														
	Poison Ivy	Infections	Blood Poisoning	Fractures	Sprains Cuts & Bruises	Organic	Misc.	Total						
State	1935 to 1938	1935 to 1938	1935 to 1938	1935 to 1938	1935 to 1938	1935 to 1938	1935 to 1938	1938	1935	1935	1935	1935	1935	1935
	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
Ala.	-	15	-	8	-	1	-	-	7	1	4	1	1	2
Ark.	2	15	1	5	-	-	-	-	29	-	11	-	4	3
Cal.	10	49	2	24	-	2	-	8	5	41	5	29	1	8
Conn.	9	31	2	5	-	-	-	2	5	22	3	14	-	1
Del.	-	-	-	-	-	-	-	1	-	1	-	-	-	-
Fla.	-	2	-	2	-	-	-	-	-	-	-	1	-	-
Ill.	6	36	3	12	-	1	-	1	6	30	2	19	-	10
Ind.	-	1	-	-	-	-	-	-	1	-	1	-	-	-
Iowa	2	20	-	4	-	-	-	2	3	16	1	9	-	1
Md.	29	169	8	60	-	4	-	10	19	147	12	89	2	25
Mt.	41.4	33.6	11.4	11.9	-	0.8	-	2.0	27.2	29.2	17.1	17.6	2.9	5.0
Totals	29	169	8	60	-	4	-	10	19	147	12	89	2	25
Total	41.4	33.6	11.4	11.9	-	0.8	-	2.0	27.2	29.2	17.1	17.6	2.9	5.0

(By Years)

Year	Poison Ivy	Infections	Blood Poisoning	Fracture	Sprains Cuts & Bruises	Organic	Misc.	Total
1935	20	14	2	3	31	11	10	71
1936	92	27	1	6	81	54	12	273
1937	28	11	1	1	16	12	1	70
1938	29	8	-	-	19	12	2	60
Total	169	60	4	10	147	89	25	504

Only one death occurred, and this was from meningitis which resulted from a twig piercing the ear of an employee in New York during 1935. One employee is still disabled as a result of a back injury sustained in October, 1937, and is now receiving treatment at a Government hospital near New York City. One other New York employee had an arm amputated during 1938 after being treated since August, 1936. In this case, infection developed from a bee sting on the right hand. The Compensation Commission has awarded this man full compensation benefits to February 17, 1943.

Over one third of the total injuries to December 31, 1938 were due to ivy poisoning. Approximately twenty nine percent of the total cases were sprains and bruises, principally to feet, legs and the back. Only one of the sprains was of a serious nature. The majority of the 89 organic injuries were to the eyes, but there was no case where the sight was lost. Ten cases of fracture were reported, including one instance where an employee's leg was broken as a result of an automobile accident. This was the only automobile accident involving injuries to W.P.A. employees reported for the duration of the program. A total of 60 cases of infection occurred, due chiefly to thorns being forced into various parts of the body, mostly the hands and fingers, but in only one instance was the consequence serious.

Table 42 - Number of Accidents Per 100 W.P.A. Employees* And Compensation Payments Made to Such Employees Injured on Blister Rust Control Work in Northeastern States

(Summary of payments compiled from reports received from Compensation Commission)

1939

State	Total No. Men* Employed	Total Man Hours Employment*	Total No. Alleged Injuries	No. Injuries Per 100 Employees	No. Men Paid Compensation	Total Amount Paid	Average Amount Paid Per Case
Maine	229	134,791	2	0.8	0	0	0
N.H.	254	135,031	3	1.3	1	19.00	19.00
Vt.	195	100,535	23	11.3	7	76.09	10.87
Mass.	205	116,888	19	8.9	1	270.28	270.28
R.I.	19	7,369	0	0	0	0	0
Conn.	49	20,583	0	0	0	0	0
N.Y.	370	233,847	17	4.6	9	652.37	72.49
Penn.	203	77,428	6	2.9	0	0	0
Totals	1,509	826,432	70	4.6	18	\$1,017.74	\$56.64

July 29, 1935 to December 31, 1938

Maine	1,487	917,590	38	2.4	10	\$51.66	\$5.17
N.H.	1,825	906,119	65	3.6	10	75.68	7.57
Vt.	1,437	639,531	156	10.9	31	557.92	18.00
Mass.	809	520,575	75	9.5	7	388.45	55.49
R.I.	118	66,089	3	2.5	1	295.00	295.00
Conn.	270	135,031	5	1.9	1	6.67	6.67
N.Y.	2,457	1,492,485	108	4.4	27	1,481.71	54.88
N.J.	29	10,870	3	10.3	0	0	-
Penn.	1,241	616,663	52	4.2	4	415.00	103.75
Totals	9,673	5,303,953	503	5.2	81	\$3,272.09	\$35.98

* Security Wage workers only.

No report has been received from the Compensation Commission as to the cost of medical treatment and hospitalization of the injured workers.

Activities of the Regional Office - Cambridge, Massachusetts
(Especially as related to the WPA Program)

Duties

Prior to the advent of the emergency programs, the personnel of the Regional Office was limited to the senior pathologist, an assistant and a secretary-stenographer. The activities were confined chiefly to general supervision of blister rust control in the Northeastern States. The office work consisted of the preparation of budgets and plans of work, summarization and analysis of field data and accomplishments, and the preparation of weekly and monthly personnel and progress reports. In addition, annual reports were prepared summarizing the results accomplished under each project in each of the States of the Northeastern Region. Property records were also kept at the Regional Office. The permanent federal personnel in the Northeastern States consisted of a state leader in each of the nine states and a total of 29 district leaders. The payrolls, expense accounts and 1034 forms for these men were handled at the Washington Office.

During the FWA program several hundred laborers were employed on federal funds in addition to the appointed men. The time sheets for the laborers were sent to the Washington Office where the payrolls were prepared and submitted for payment. The same applies to expense accounts and 1034 forms. However, under the WPA program, which began July 29, 1935, practically all office work in connection with this program was assigned to the Regional Office. The office work consisted of the following items:

Preparation of budgets, plans, contracts, and schedules of work; preparation of payrolls for a maximum of 4,457 men; auditing of expense accounts for a maximum of 116 appointed men and a maximum of 75 laborers operating personally-owned machines on a four cent per mile basis; auditing all 1034 vouchers for contractual items, purchase of supplies and equipment for the entire region or arranging for such purchases through the procurement official; administrative record work in connection with all compensation cases; issuance of instructions to field personnel; and reports (weekly personnel, semi-monthly personnel and financial, monthly progress report of field activities, monthly news item, and fiscal and calendar year reports).

Personnel

At the beginning of the WPA program considerable difficulty was experienced in getting a clerical force for the Regional Office, due to the fact that the employees were taken from relief rolls and the desired number could not be obtained readily by the local employment office. During the first half of August, 1935, it was possible to secure only three workers. This number was increased to 10 during the latter half of August and to 12 during the latter half of September. The force was continued on this basis from that time until April 30, 1936, and consisted of 4 clerks, 3 stenographers, 3 typists and 2 office boys. During the period May 1, 1936 to October 3, 1936, the office force was increased to 22 workers, consisting of 8 clerks, 10 typists, 2 stenographers and 2 office boys. This increase in force was made in order to expedite payment of salaries and expenses and because the field force had been increased to about 4,500 workers. The office force during the field season of

1936 was divided into two shifts, one from 8 a.m. to 5 p.m. and the other from 5 p.m. to 10:15 p.m. This arrangement was necessary due to the limited space available and to prevent the purchase of considerable extra equipment which would have been essential if only one shift had been employed. The double-shift arrangement was used only for about a week after the ending of each payroll period. During the remainder of the time the services of the workers were staggered and they functioned on a one-shift per day basis. Mr. Cheyne took charge of the night shift, while Mr. Stimson directed the work during the day. The senior pathologist and his secretary worked the usual hours from 9 a.m. to 4:30 p.m. Frequently, however, the senior pathologist found it necessary to work a part or all of both shifts. In fact, in order to accomplish the desired results, it was often necessary for all the four regular employees to work overtime during the rush season.

The W.P.A. force at the Regional Office was reduced to 10 employees on October 16, 1936 due to the seasonal curtailment in the field work. One typist resigned in February, 1937 to take private employment, and two additional clerks were released on April 30, 1937. Since that date, seven W.P.A. relief workers have been continuously employed. Five of these employees have been on the project since its inception in 1935, and the other two were assigned during the spring of 1936. As a result of the training and experience gained by these employees during the past three years, their services have gradually become more valuable.

A total of 33 security wage workers have been employed at the Cambridge Office during the period August 1, 1935, to December 31, 1938. Six of these persons resigned to accept private employment, one resigned to be married, five were discharged because of inefficiency, thirteen were released because of curtailment in the field work, and seven are still employed. A total of 10 of the 33 workers were promoted to higher ratings during their service at the office. No politics were evident in the selection of personnel, and promotions were based entirely on the efficiency record of those concerned.

Payroll Procedure

Up to December 31, 1938, a total of 5,564 WPA payrolls had been prepared at the Cambridge Office and transmitted to the Treasury Accounts Office for payment. Payrolls were prepared on a semi-monthly basis and usually two payrolls, one for relief and another for non-relief employees, covered the services of all WPA laborers employed under the direction of a district leader.

The time sheets for the WPA laborers were submitted by the district leaders semi-monthly direct to the Cambridge Office. The payrolls were prepared there from these time sheets, usually the first day they were received, and sent by messenger to the Treasury Accounts Office at Boston. During 1935 the checks were mailed to the Cambridge Office where they were grouped by districts and sent by registered special delivery mail to the district leaders for distribution to the field workers. This procedure was continued until June 30, 1936, except that beginning May 1 our messenger called for the checks at the Accounting Office in order to expedite delivery. During the first part of July, 1936, a new arrangement was initiated in the distribution of checks whereby each check was mailed by the Cambridge Office direct to the individual concerned, the envelopes being addressed in advance of receipt of the checks. This plan speeded up the delivery of checks by at least a day. A few checks were reported as lost, but the number was insignificant. The interval between the dates the payrolls were submitted to the Treasury Accounts Office and the dates the checks were received at our

Cambridge Office averaged 3.4 days for 5,564 payrolls - see following table. Since April 1, 1938, checks have been sent direct to the employee by the Disbursing Office of the U. S. Treasury.

Table 43 - Tabulation Showing Time Involved from Date Voucher Transmitted To Treasury Accounts Office to Date Checks Were Issued
Period July 29, 1935 to December 31, 1938.

<u>Days Involved</u>	<u>Number of Vouchers</u>	<u>Percent</u>
1	953	17.2
2	1,104	19.9
3	1,170	21.0
4	976	17.6
5	597	10.7
6	385	6.9
7	227	4.1
8	102	1.8
9	25	0.5
10	3	.1
11	3	.1
12	4	.1
13	2	.0 +
14	1	.0 +
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	2	.0 +
	5,564	100.0

Payroll Encumbrances

During the period July 29, 1935 to January 31, 1936, the Treasury Department required the establishment of an advance encumbrance for each payroll. This method entailed a large amount of clerical work. Fortunately, the system was changed February 1, 1936 to allow our office to set up an advance encumbrance covering the total estimated amount to be obligated by each official project for each payroll period. This procedure greatly simplified this phase of the work.

For several months difficulty was encountered in securing prompt cancellation of unobligated encumbrances. In order to make available for re-encumbrance any unobligated balances, it is necessary for this office to issue Form A-5A, notice of cancellation of encumbrance. In many instances, it required three or four months before final approval and release of these unobligated balances could be obtained from the Treasury Accounts Office. This condition complicated our record-keeping and made it difficult to determine the exact status of funds. However, early in 1937, this situation was remedied and prompt action has since been taken on our requests for cancellation of unobligated encumbrances.

Procurement Procedure

During the first few weeks of the WPA program, it was necessary to obtain all equipment and supplies on requisition through the Procurement Division of the Treasury Department. The length of time involved in this procedure was so great, it decidedly handicapped field activities. On August 29, 1935, authority was

created to issue requisitions and purchase supplies under competition without reference to the Procurement Division where the cost involved did not exceed \$300. This procedure greatly facilitated delivery allowing the program to go forward with more speed and efficiency. Effective February 1, 1939, such authority was reduced to purchases amounting to \$50.00 or less.

In making purchases of small supplies and equipment in the field we were handicapped until the latter part of February, 1938, because such items had to be obtained either through the Procurement Officer or secured through the Cambridge Office under the \$300. exemption. The Accounting Office was unable to permit the inclusion of such items in the monthly expense account on Form 1012, as had been the practice under the regular program. However, such action was later approved.

Payment of Accounts (Forms 1012 and 1034)

During 1937 and 1938, excellent service was rendered by the Treasury Department in the auditing and payment of 1012 and 1034 vouchers. On the whole, the field personnel made fewer mistakes in the preparation of such accounts, which facilitated the advance auditing of the vouchers at the Cambridge Office. The Boston Accounting and Disbursing Offices of the Treasury Department are to be commended on the prompt services rendered. In many instances, the payees received their checks within two days after the vouchers were forwarded to Boston for payment. This prompt service has been greatly appreciated by our field personnel as well as dealers rendering services to our Division.

Accomplishments in Blister Rust Control Under the W.P.A. Program in The Northeastern States

Ribes Eradication Work During 1938

Ribes eradication was the major field activity performed on the blister rust control project under the W.P.A. Program. Such work was conducted in 220 townships in 51 counties of the Northeastern States during the period May to October, 1938. A total of 382,812 acres, practically all on individually-owned lands, was cleared of 6,552,952 wild Ribes and 12,858 cultivated bushes as a result of 68,600 man days of work during the 1938 season.

Six-man crews each consisting of five unskilled laborers and a foreman were used on the 1938 W.P.A. Ribes eradication work. Practically all of the areas were systematically examined by crews in strip formation, as personnel problems and funds available did not permit the employment of scouts on this work. This procedure resulted in the destruction of numerous Ribes concentrations, but was a factor in restricting the amount of acreage examined.

Table 44. - Distribution of Work and W.P.A. Personnel
Employed on Ribes Eradication Work in Northeastern States - 1938

State	No. Counties in Which Work Performed	No. Towns Where Work Performed	No. Security Wage Workers	
			Maximum	Average*
Maine	11	39	162	131
N.H.	9	34	162	136
Vt.	6	14	128	108
Mass.	7	33	170	128
R.I.	1	1	15	13
Conn.	1	5	33	22
N.Y.	12	63	284	226
Penn.	4	33	114	103
Totals	51	220	1,008	862

* For period May 1 to September 30, 1938.

Table 45 - Ribes Eradication Work Performed Under W.P.A. Program in Northeastern States During 1938.
(Excludes nursery sanitation and cultivated black currant elimination)

State	Type of Erad.	Acreage		Ribes Pulled		Total Man Days	Local Coop	State	Cost	W.P.A.	Total	Cost	Ribes	Per Acre
		Total	Protected	Wild	Cult.									
Maine	Initial	16,362	6,032	432,591	996	4,334	887.36	179.71	14,018.21	15,085.27		.922	26.4	
	Re-Erad.	36,081	12,375	577,512	589	6,079	945.07	-	20,694.32	21,639.39		.600	16.0	
	Total	52,443	18,907	1,010,103	1,585	10,413	1832.42	179.71	34,712.53	36,724.66		.700	19.2	
N.H.	Initial	25,033	15,910	792,907	204	5,014	253.35	-	17,401.98	17,658.31		.705	31.7	
	Re-Erad.	24,375	14,900	429,011	170	4,455	227.67	-	15,008.62	15,236.49		.625	17.6	
	Total	49,408	30,810	1,221,918	374	9,469	484.20	-	32,410.60	32,894.80		.666	24.1	
Vt.	Initial	22,430	4,540	571,868	1,057	5,104	918.08	-	15,552.54	16,471.42		.734	25.5	
	Re-Erad.	12,095	2,597	235,003	291	3,062	539.21	-	9,359.91	9,899.12		.818	19.4	
	Total	34,525	6,937	806,871	1,348	8,166	1,458.09	-	24,912.45	26,370.54		.764	23.4	
Conn.	Initial	24,922	6,911	72,174	967	824	136.43	157.24	2,969.90	3,263.62		.131	2.9	
	Re-Erad.	77,247	27,121	653,154	3,023	3,683	2,511.25	1,680.49	33,530.31	37,722.66		.488	8.5	
	Total	102,169	34,032	725,328	3,990	9,707	2,648.36	1,837.73	36,500.21	40,986.50		.401	7.1	
S. I.	Initial	-	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	6,273	3,184	15,842	1,008	881	-	-	3,261.97	3,261.97		.520	2.5	
	Total	6,273	3,184	15,842	1,008	881	-	-	3,261.97	3,261.97		.520	2.5	
Cand.	Initial	-	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	9,406	1,301	118,891	-	1,614	508.00	-	6,025.01	6,533.01		.695	12.6	
	Total	9,406	1,301	118,891	-	1,614	508.00	-	6,025.01	6,533.01		.695	12.6	
I.I.	Initial	73,325	24,442	1,676,676	2,819	18,147	160.00	2,689.58	64,896.24	74,715.82		1.02	22.9	
	Re-Erad.	26,304	8,768	203,619	460	3,458	160.00	2,905.58	11,466.32	14,531.90		.552	7.7	
	Total	99,629	33,210	1,880,295	3,279	21,605	320.00	12,565.16	76,362.56	89,247.72		.896	18.9	
Penn.	Initial	26,246	5,967	751,618	1,260	6,496	-	-	28,430.44	28,430.44		1.01	26.6	
	Re-Erad.	713	95	21,996	14	239	-	-	1,026.54	1,026.54		1.44	30.8	
	Total	28,959	4,062	773,614	1,274	6,735	-	-	29,456.98	29,456.98		1.02	26.7	
N.C.	Initial	190,318	61,602	4,297,834	7,303	39,919	2359.04	9,996.53	143,269.31	155,624.88		.818	22.6	
	Re-Erad.	192,494	70,841	2,255,118	5,555	28,681	4892.03	4,586.07	100,373.00	109,851.10		.571	11.1	
	Total	382,812	132,443	6,552,952	12,858	68,600	7251.07	14,582.60	243,642.31	265,475.98		.693	17.1	

* Includes 48.00 S.E. and P.O. funds.

Source of credit. The cost figures are based on the total cost of laborers and foremen employed in locating and pulling Ribes eradication. The cost of laborers and foremen employed in locating and pulling Ribes eradication is included in the cost of laborers and foremen employed in locating and pulling Ribes eradication. The cost of laborers and foremen employed in locating and pulling Ribes eradication is included in the cost of laborers and foremen employed in locating and pulling Ribes eradication.

Table 46 - Ribes eradication work performed under W.P.A. Program in Northeastern States
During Period 1936 - 1938, Inclusive.
(Excludes nursery sanitation and black currant elimination)

By States

State	Type of Erad.	Acreage Worked	Ribes Pulled		Total Man Days	Local Coop.	State	W.P.A.	Total	Per Acre	
			Wild	Cult.						Cost	Ribes Days
Maine	Initial	226,730	11,697,271	5,368	53,237	1,720.98	2,548.50	186,793.98	191,063.41	.843	51.6
	Re-Erad.	220,737	5,012,456	8,036	39,862	1,833.79	1,430.52	142,887.68	140,151.99	.662	22.7
	Total	447,467	16,709,727	14,004	93,099	3,554.72	3,979.02	329,681.66	337,215.40	.754	37.5
N.H.	Initial	215,862	8,562,123	5,689	46,626	578.26	149.65	159,770.51	160,498.22	.744	39.7
	Re-Erad.	226,840	4,730,420	1,445	41,313	1,657.19	123.83	141,677.09	143,458.11	.632	20.8
	Total	442,802	13,292,543	7,134	87,939	2,235.46	273.48	301,447.40	303,956.33	.686	30.0
Vt.	Initial	134,840	4,134,860	3,305	43,317	10,423.00	172.08	128,468.59	139,063.67	1.03	30.7
	Re-Erad.	65,920	1,160,436	918	17,534	3,233.34	151.25	54,707.29	53,071.89	.831	17.6
	Total	200,760	5,295,296	4,223	60,851	13,656.34	203.34	183,175.89	197,155.56	.982	26.4
Mass.	Initial	114,402	1,015,553	14,908	13,158	2,450.41	689.52	60,782.07	63,822.00	.470	8.9
	Re-Erad.	202,470	2,733,164	7,859	32,208	7,946.62	4,072.81	126,385.31*	138,403.24	.684	13.5
	Total	316,872	3,748,717	22,767	45,366	10,396.03	4,661.83	177,167.38*	192,225.24	.607	11.8
S.I.	Initial	4,189	1,087	445	726	-	-	2,933.48	2,933.48	.699	1.0
	Re-Erad.	41,309	66,590	3,118	6,795	-	294.73	25,460.08	25,754.81	.623	1.6
	Total	45,508	70,677	3,563	7,519	-	294.73	28,393.56	28,688.29	.630	1.6
Conn.	Initial	16,227	87,905	2,138	2,287	-	22.84	8,944.53	8,967.47	.553	5.4
	Re-Erad.	42,772	561,693	306	11,182	684.00	42.59	42,872.92	43,599.51	1.02	13.1
	Total	58,999	649,599	3,044	13,469	684.00	65.63	51,817.45	52,566.98	.891	11.0
N.Y.	Initial	505,668	15,888,534	18,936	137,009	176.00	57,470.38	511,621.37	569,267.75	1.13	31.4
	Re-Erad.	110,255	2,209,557	3,019	22,152	174.40	9,788.72	82,931.12	92,894.24	.843	20.0
	Total	615,923	18,098,091	21,955	159,161	350.40	67,259.10	594,552.49	662,161.99	1.08	29.4
N.J.	Initial	3,625	21,127	299	951	-	298.10	3,862.30	4,160.40	1.15	5.8
	Re-Erad.	1,417	16,956	15	392	-	-	1,631.36	1,631.36	1.15	12.0
	Total	5,042	38,083	314	1,343	-	298.10	5,493.66	5,791.76	1.15	7.6
Penn.	Initial	144,390	9,150,046	10,818	57,278	-	336.70	215,182.57	215,519.27	1.49	65.4
	Re-Erad.	14,658	1,033,931	522	7,186	-	-	26,682.88	26,682.88	1.82	70.5
	Total	159,048	10,183,977	11,340	64,464	-	336.70	241,865.45	242,202.15	1.52	64.0
Totals	Initial	1,365,943	50,561,547	62,504	354,586	15,343.60	61,587.87	1,268,359.20	1,345,295.67	.985	37.0
	Re-Erad.	926,478	17,525,202	25,838	178,322	15,528.34	15,983.96	645,235.73*	676,648.03	.730	18.9
	Total	2,292,421	68,086,749	88,342	533,208	30,876.94	77,471.83	1,913,594.93*	2,021,943.70	.862	29.7

* Includes \$8.53 B.E. and P.Q. funds.

Basis of costs: Same as listed for Table 45.

Table 47 - Ribes Eradication Work Performed Under W.P.A. Program in Northeastern States
During Period 1935 - 1938, Inclusive

(Excludes nursery sanitation and cultivated black current elimination)

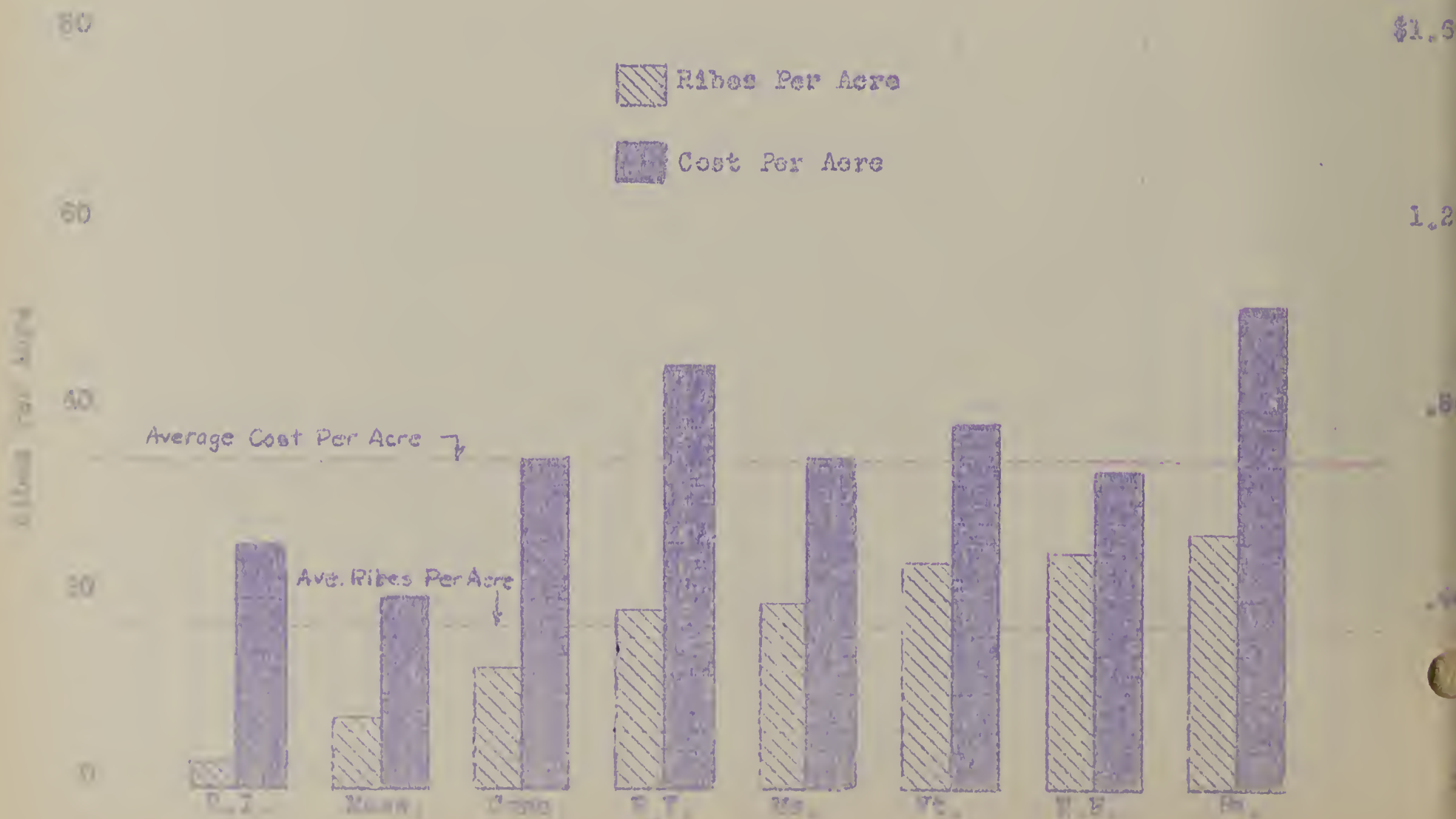
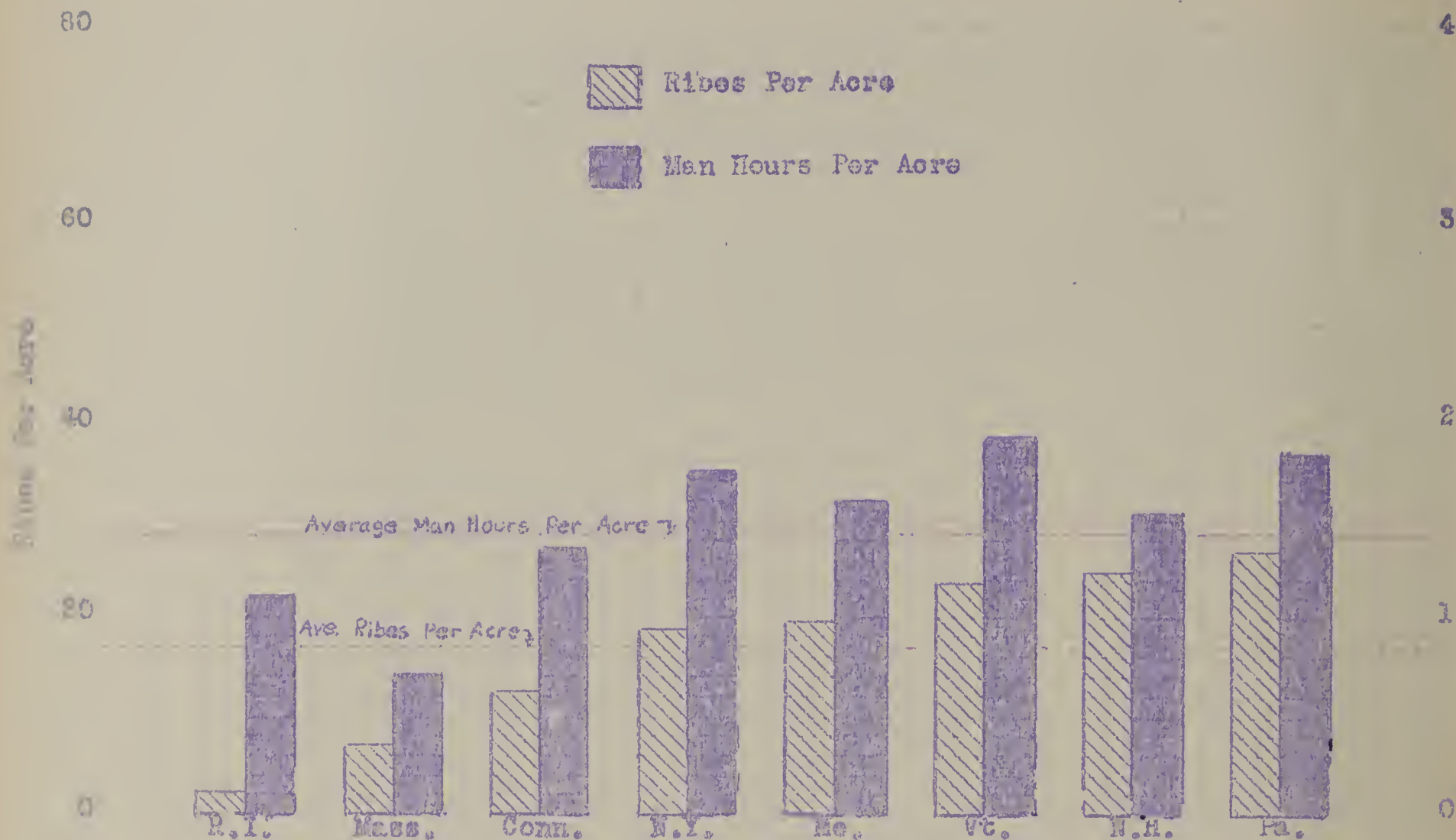
(By Years)

Year	Type of Erad.	Acreage Worked	Ribes Pulled		Total Man Days	Cost			Per Acre	
			Wild	Cult.		Local Coop.	State	W.P.A.	Cost	Ribes Days
1935	Initial	263,758	9,460,626	19,392	77,578	2,037.37	11,269.79	266,098.93	279,406.09	1.06 35.9
	Re-Erad.	156,885	2,545,100	3,592	35,518	2,193.55	2,884.91	127,308.20	132,386.65	.844 16.2
	Total	420,643	12,005,726	22,984	113,096	4,230.92	14,154.70	393,407.13	411,792.75	.979 26.5
1936	Initial	727,485	29,901,209	30,843	193,039	8,459.72	23,247.39	715,199.52	746,906.63	1.03 41.1
	Re-Erad.	450,011	10,687,609	15,137	95,291	5,936.15	4,003.29	547,746.90	557,686.34	.795 23.7
	Total	1,177,496	40,588,818	45,980	291,330	14,395.87	27,250.68	1,062,946.42	1,104,592.97	.938 34.5
1937	Initial	184,582	6,901,878	4,966	41,050	2,492.47	17,074.16	143,791.44	163,558.07	.886 37.4
	Re-Erad.	127,088	2,037,375	1,554	19,132	2,506.61	4,409.69	69,807.63	76,723.93	.604 16.0
	Total	311,470	8,939,253	6,520	60,182	4,999.08	21,483.85	213,599.07	240,082.00	.771 28.7
1938	Initial	190,318	4,297,834	7,303	39,919	2,359.04	9,996.53	143,269.31	155,624.68	.818 22.6
	Re-Erad.	192,494	2,255,118	5,555	28,681	4,892.03	4,586.07	100,373.00*	109,851.10	.571 11.7
	Total	382,812	6,552,952	12,858	68,600	7,251.07	14,582.60	243,642.31*	265,475.98	.693 17.1
Totals	Initial	1,365,943	50,561,547	62,504	354,586	15,348.60	61,587.87	1,268,359.20	1,345,295.67	.985 37.0
	Re-Erad.	926,478	17,525,202	25,838	178,622	15,528.34	15,883.96	645,235.73*	676,648.03	.730 18.9
	Total	2,292,421	68,086,749	88,342	533,208	30,876.94	77,471.83	1,913,594.93*	2,021,943.70	.882 29.7

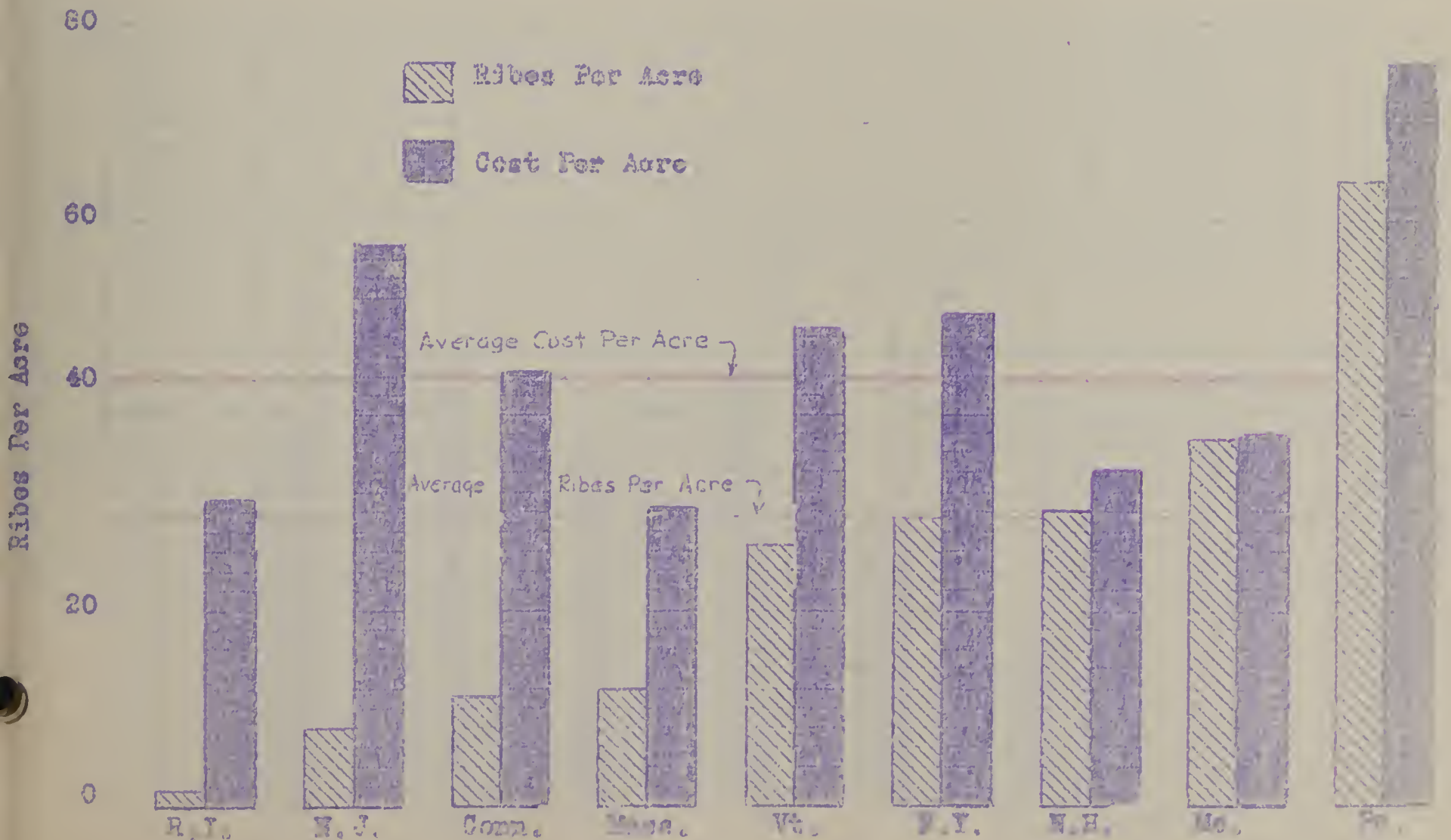
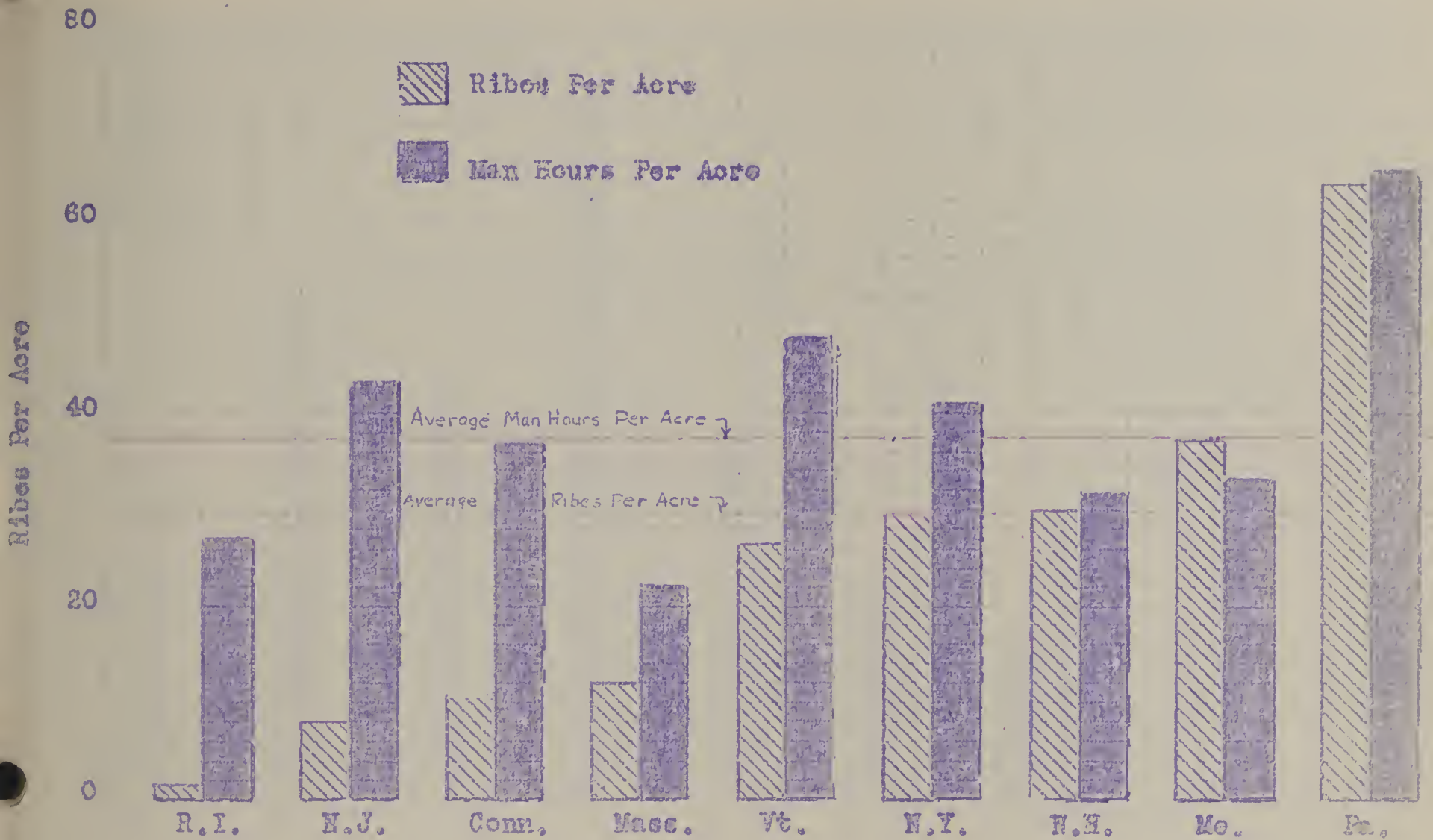
* Includes \$8.53 B.E. and P.Q. funds.

Basis of costs: Same as listed for Table 45.

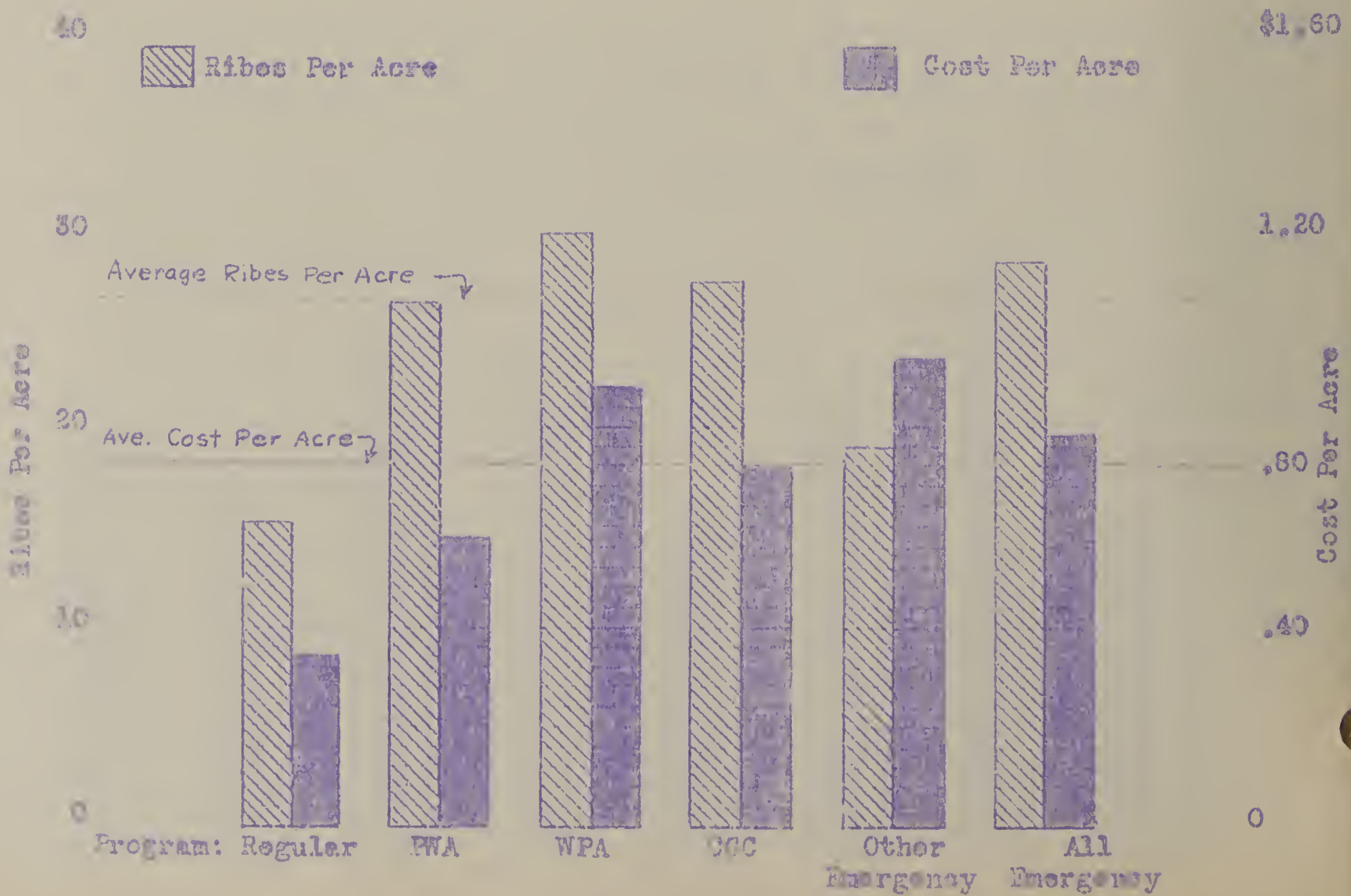
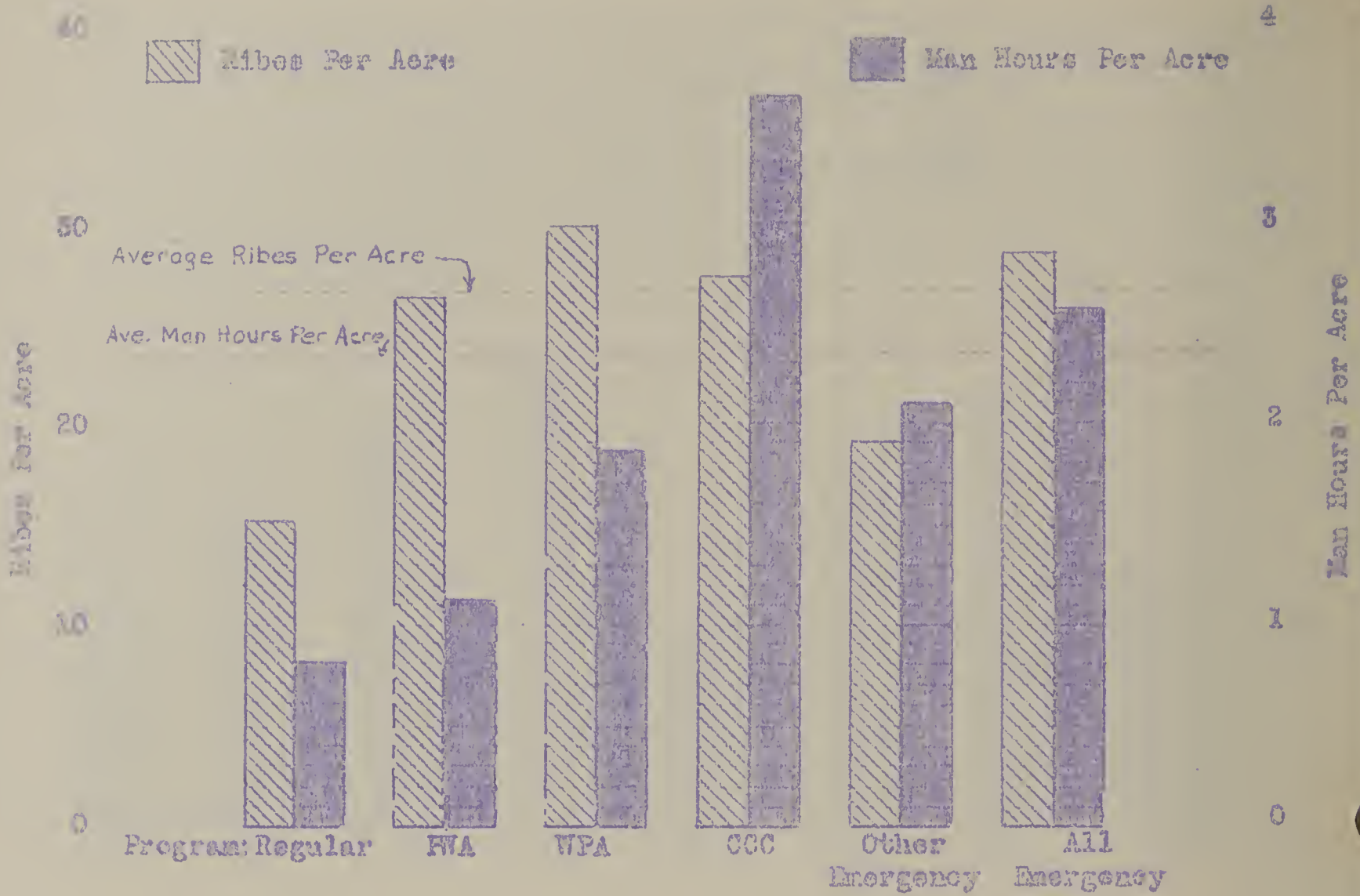
COMPARISON BY STATES OF PER ACRE VALUES FOR RIBES ERADICATION WORK
WPA PROGRAM - NORTHEASTERN STATES - 1938



COMPARISON BY STATES OF PER ACRE VALUES FOR RIBES ERADICATION WORK
WPA PROGRAM - NORTHEASTERN STATES - 1935-1936



OPERATIONS OF PROGRAMS OF THE ARMY AND NAVY FOR RIBES NAVIGATION WORK
SOUTHEASTERN STATES - 1935-1939, INCLUSIVE



Supervision of 1938 W.P.A. Ribes Eradication Work

Due to the limited amount of money available and the necessity of maintaining the 95-5 ratio as regards relief and non-relief employees, no W.P.A. supervisors were employed during the 1938 season. In most instances, the district blister rust control leaders were able to give adequate supervision to the W.P.A. project, but in New York and Maine state men were assigned to assist in the supervisory activities.

Table 48 - State Supervision of Ribes Eradication Work Performed Under W.P.A. Program in Northeastern States During 1938.

State	No. Supervisors	Man Days Worked By Supervisors	Total Cost of Supervisors (All Paid by State)
Maine	4	226	\$1,195.88
N.Y.	15	1,193	6,454.12
Totals	19	1,419	7,650.00

Pine and Control Area Mapping

Up to the advent of the Emergency Programs in 1933, only a limited amount of pre-eradication survey work had been performed in the Northeastern States. During the early years of the control program, the acreage of white pine needing initial protection was so great and its location so evident and general, little mapping was necessary except to indicate the boundaries of the control areas. However, in recent years, the unprotected pine areas have been more isolated and smaller in size with larger proportionate protection zones. Consequently, it became necessary to do detailed mapping in order to locate the pine and to reduce the protection zone acreage to a minimum consistent with effective control. Local funds were available only for Ribes eradication work, while the state appropriations in most instances were so small that their use was confined to the yearly employment of foremen and scouts during the period May to September. The federal money was only sufficient to employ state and district leaders and the activities of these men were necessarily restricted to informational, service, and supervisory activities. The Emergency Programs provided for the first time a force of men to carry on mapping projects during the interval between the Ribes eradication seasons and excellent progress has been made since 1933 in mapping the blister rust control areas in the Northeastern States.

During the period January 1 to April 30 and from November 1 to December 31, 1938, pine and control area mapping was the major project under the W.P.A. Program in this Region. Such activities were conducted in all states, except New Jersey and Rhode Island. The 1938 surveys resulted in 1,222,371 acres being mapped in detail, and the examination and elimination of an additional 1,869,593 acres due to lack of sufficient white pine to justify the cost of control measures. In addition, 747 miles of control area boundary lines were painted in the field. The detailed accomplishments in each state are shown in the following summary.

Table 49 - Summary of Pine and Control Area Mapping Under W.P.A. Program in Northeastern States During 1938

State	No. Towns	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Total Man Days	Towns & Counties	Cost			
							State	B.E. & P.Q.	W.P.A.	Total
75		288,827	820,007	-	6,778	-	90.80	-	24,968.57	25,059.37
51		178,484	58,042	-	6,176	675.35	-	-	24,075.35	24,748.70
51		197,998	739,716	37	3,061	488.89	-	-	9,686.10	10,074.99
38		179,846	130,614	182	3,672	312.78	44.66	36.24	14,839.93	15,233.67
		-	-	-	-	-	-	-	-	-
4		29,672	-	91	958	175.00	-	-	3,669.16	3,844.16
80		300,644	75,214	-	5,425	-	3577.13	-	19,059.44	22,426.57
76		47,460	*	407	1,343	-	-	-	6,236.19	6,236.19
375		1,222,371	1,869,593	747	27,413	1652.02	3512.49	36.24	102,432.74	107,633.49

In Pennsylvania, several hundred thousand acres of non-pine land were eliminated, but no definite record was kept.

Costs: Includes actual cost of personnel assigned to mapping work, transportation and expenses for mapping equipment.

Table 50 - Summary of Pine and Control Area Mapping Under W.P.A. Program in Northeastern States, 1935-1938, Inclusive.

(By States)

State	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Total Man Days	Towns & Counties	Cost			
						State	B.E. & P.Q.	W.P.A.	Total
1	271,205	3,221,889	1,720	22,346	-	2448.44	17.60	89,919.82	92,385.86
507	025	169,782	-	20,068	675.35	181.14	1.25	88,059.96	88,917.70
1	046,983	2,033,361	730	13,343	984.09	-	-	49,790.04	50,774.23
3	3,125	685,662	761	11,257	2108.88	818.25	41.75	49,120.93	52,089.16
73	127	-	-	862	-	820.25	-	3,443.36	4,263.61
67	205	131,017	284	2,863	175.00	619.70	420.29	12,369.72	13,584.71
2	024,375	527,920	2,399	20,908	-	5042.41	25.11	95,939.82	101,007.34
277	756	*	2,603	9,655	-	-	4.00	43,657.45	43,661.45
375	101,071	6,799,631	8,497	101,308	3942.82	9930.19	510.00	432,301.15	446,684.16

(By Years)

616,026	405,569	1,591	10,937	144.00	1036.64	-	46,959.28	48,120.63
124,601	2,157,767	4,916	32,701	801.00	3927.96	405.00	153,769.78	156,903.74
138,073	2,366,582	1,241	30,257	1845.20	1453.10	66.76	129,159.35	132,026.41
222,371	1,869,593	747	27,413	1652.02	3512.49	36.24	102,432.74	107,633.49
101,071	6,799,631	8,497	101,308	3942.82	9930.19	510.00	432,301.15	446,684.16

A large acreage of non-pine land was also eliminated in Pennsylvania, but no definite record was kept.

Costs: Same as listed for Table 49.

Mapping of Areas Containing Blown-Down Timber - W.P.A. Program

Our Division cooperated with the state and U. S. Forest Service officials in New Hampshire and Vermont during November and December, 1938 by assigning W.P.A. laborers to map the location and extent of the areas containing timber felled by the hurricane of September 21, 1938. This work supplemented similar activities by other agencies. The W.P.A. mapping work in Vermont was restricted to townships along the Connecticut River valley where most of the hurricane damage occurred, while the work in New Hampshire was confined to those sections of the state not mapped by use of autogiros. The special W.P.A. projects in New Hampshire and Vermont assisted the Forest Service materially in completing a survey of the damaged areas. The information obtained is also of great value to our Division in planning future blister rust control work. Ribes eradication will not be conducted in the affected areas during 1939. The disturbance of the duff will permit the stored Ribes seeds to germinate, consequently we may expect a regrowth of such bushes to become a control factor two or three years later. Many areas that we have classed as on a control maintenance basis may revert to conditions similar to those existing at the time of the initial protection work. The pines in New England produced a very heavy seed crop during 1938, consequently reproduction should occur in many of the damaged areas. From a blister rust control viewpoint, we are concerned primarily with pine growth under 30 years of age and such growth was not damaged appreciably by the storm.

Table 51 - Summary of Blown-Down Timber Mapping Conducted
Under Federal W.P.A. Program in Northeastern States
During Calendar Year 1938.

State		N. H.	Vt.	Totals
No. towns in which work performed		30	18	48
No. men employed		79	19	98
Acreage mapped		41,499	22,993	64,492
Acreage examined, but not mapped*		462,258	326,361	788,619
Total man days		964	576	1,540
Cost	Towns	\$47.92	-	\$ 47.92
	County	22.92	-	22.92
	W.P.A.	3,972.52	\$1,850.04	5,822.56
	Total	\$4,043.36	\$1,850.04	\$5,893.40

* Not sufficient damage to justify mapping.

Nursery Sanitation

W.P.A. employees were used on nursery sanitation work performed in the environs of 11 pine growing nurseries in the Northeastern States during the spring of 1938. This control work assured the continued production of disease-free white pines for use on reforestation projects. A total of 6,937 acres was examined; 2,391 wild and 3 cultivated bushes being removed as a result of 258 man days labor. The accomplishments, by states, are shown in Table 52.

Table 52. - Summary of Nursery Sanitation Work Under W.P.A. Program in Northeastern States During 1938
(All Re-Eradication Work)

State	No. Nurseries Worked	Acreage Worked	Ribes Pulled		Total Man Days	Cost				Per Acre		
			Wild	Cult.		Indiv.	State	W.P.A.	Total	Cost	Ribes	Man Days
Mass.	2	415	552	3	49	-	32.95	180.99	213.94	.518	1.3	.12
Vt.	6	2,273	4	-	40	-	-	170.56	170.56	.075	.002	.02
N.H.	3	3,690	1,709	-	139	-	130.00	421.09	551.09	.149	0.5	.04
Conn.	1	559	126	-	30	55.50	-	120.98	176.46	.316	0.2	.05
Total	11	6,937	2,391	3	258	55.50	162.95	893.60	1112.05	.160	0.3	.04

Basis of costs: Includes cost of laborers and foremen while engaged in locating and eradicating Ribes in nursery sanitation zones, and cost of crew transportation.

Table 53. - Summary of Nursery Sanitation Work Under W.P.A. Program in Northeastern States, 1935-1938, Inclusive

State	Type of Erad.	Acreage Worked	Ribes Pulled		Total Man Days	Cost				Per Acre		
			Wild	Cult.		Indiv.	State	W.P.A.	Total	Cost	Ribes	Man Days
Mass.	Re-Erad.	286	144	1	123	-	-	420.12	420.12	1.47	0.5	.01
Vt.	Re-Erad.	380	257	75	75	-	24.00	218.27	242.27	.638	0.7	.20
N.H.	Re-Erad.	1,142	2,260	3	322	-	471.45	1138.48	1609.91	1.41	2.0	.28
Conn.	Initial	590	27	45	9	-	-	46.50	46.50	.079	.04	.01
Vt.	Re-Erad.	2,901	43	2	49	-	-	217.08	217.08	.075	.01	.02
Total		3,491	70	47	58	-	-	263.56	263.56	.075	.02	.02
Mass.	Re-Erad.	932	53	8	73	-	-	171.59	171.59	.184	.06	.08
Vt.	Re-Erad.	8,830	3,322	1	482	-	309.76	1646.41	1956.17	.222	0.4	.05
N.H.	Re-Erad.	1,690	3,110	28	207	307.50	-	836.29	1143.79	.677	1.8	.12
Conn.	Initial	590	27	45	9	-	-	46.50	46.50	.079	.04	.01
Total	Re-Erad.	16,161	9,189	118	1311	307.50	805.19	4648.22	5760.91	.356	0.6	.08
Total		16,751	9,216	163	1320	307.50	805.19	4694.72	5807.41	.347	0.6	.08

Basis of costs: Same as listed for Table 52.

Elimination of Ribes Nigrum (European Black Currant)

Ribes nigrum elimination work under the W.P.A. Program during 1938 was limited to Massachusetts where 4 W.P.A. employees were used for 115 man days making a re-survey in 16 townships in Norfolk County to ascertain whether the original black currant elimination work was effective and if any replanting of such bushes had occurred. This work was combined with a re-check for other cultivated Ribes in control areas. The men inspected 12,155 properties and located 128 patches of Ribes nigrum containing 607 bushes. Of this number, 76 were removed before freezing weather prevented further eradication work. In the re-check for other cultivated Ribes in the control areas, only one bush was found and this plant was immediately destroyed. A total of \$511.55 was expended on this survey work, all except \$3.20 being paid from W.P.A. funds.

Table 54 - Summary of Ribes Nigrum Elimination Work Under
WPA Program in Northeastern States, 1936*- 1938, Inclusive
(All work in State of Massachusetts)

	1936	1937**	1938**	Total
No. townships in which work done.....	12	13	16	
No. properties inspected.....	49,466	12,383	22,153	84,002
No. patches located.....	468	14	128	610
No. Ribes located (Nigrum.....	2,392	79	607	3,078
(Other cult.....	87	497	1	585
No. Ribes pulled (Nigrum.....	1,914	42	76	2,032
(Other cult.....	0	412	1	413
Total man days.....	294	144	116	554
(Individuals.....	\$242.90	-	\$3.20	\$246.10
Cost (W.P.A.....	1,712.75	\$543.85	508.35	2,764.95
(Total.....	1,955.65	543.85	511.55	3,011.05

* No black currant elimination work performed under the WPA program during 1936.

** Re-check of control areas.

Blister Rust Canker Elimination

During 1938, relief labor was used on blister rust canker elimination work in four of the Northeastern States. Such activities were confined to publicly-owned white pine plantations containing at least 20% infection on trees under 25 feet in height. In some instances, the trees were pruned to about half their height, as experience has shown that it is more practical to follow this procedure, especially with inexperienced labor, than to search for and destroy the individual blister rust cankers on the lower branches. The results of the 1938 canker elimination work and the totals for the entire W.P.A. Program are shown in Tables

Table 55 - Blister Rust Canker Elimination Work Under W.P.A. Program
in Northeastern States During 1938.

State	No. Towns	Est. No. Pines Examined	No. Fatally Infected Pines Cut Down	No. Pines From Which Cankers Removed	No. Cankers Removed		Total Man Days	Cost		
					Branch	Stem		Towns	State	W.P.A.
Mass.	2	19,669	1,598	3,337	3,962	171	414	25.00	-	1252.26
N.Y.	1	5,348	1,265	213	218	-	222	794.00	-	102.78
Vt.	8	413,395	20,973	53,225	75,189	690	2126	-	576.90	7945.93
Me.	4	133,042	1,865	21,426	44,901	772	1180	-	-	4957.14
Totals	15	571,454	25,699	78,200	124,170	1633	3942	819.00	576.90	14,258.11

asis of costs: Includes cost of personnel assigned to canker elimination work, crew transportation, and cost of equipment and supplies.

Table 56 Blister Rust Canker Elimination Work Under W.P.A.
Program in Northeastern States, 1935-1938, Inclusive.

State	Est. No. Pines Examined	No. Fatally Infected Pines Cut Down	No. Pines From Which Cankers Removed	No. Cankers Removed		Total Man Days	Cost		
				Branch	Stem		Local	State	W.P.A.
Mass.	28,581	5,731	638	711	-	219	-	-	779.37
N.Y.	190,369	37,161	17,213	10,932	213	2,073	405.00	20.50	6176.91
Vt.	89,292	10,685	3,108	3,513	-	2,215	1237.00	57.98	7724.45
Me.	1,348,464	144,258	176,269	234,037	690	10,253	240.00	1301.82	40,250.33
Totals	211,952	4,174	33,453	78,950	1636	1,925	-	-	8,075.99
Total	1,868,658	201,909	230,671	336,143	2589	16,690	1882.00	1390.30	63,037.55

asis of costs: Same as listed for Table 55.

Special Field Studies

Pine Infection Studies

W.P.A. laborers were used during the fall of 1937 in five of the Northeastern States (Maine, New Hampshire, Vermont, Massachusetts and New York) to assist in examining white pines in protected and unprotected areas to determine the amount of pine infection and the effectiveness of blister rust control work.

The white pines in 91 plots, aggregating 87 $\frac{1}{2}$ acres, were examined in protected areas in 68 townships in five states. These plots contained 66,715 white pines, of which 11,653, or 17.5% were infected with 15,567 blister rust cankers. Even though the protection work had been conducted 3 to 16 years prior to 1937, and had been performed chiefly by owners' labor, only 8.7 percent of the diseased pines became infected for the first time after the application of control measures. The studies show that ordinary Ribes eradication work has been effective in controlling the rust but that reworking of areas for Ribes should not be delayed too long if protection is to be maintained effectively. (Areas should be inspected at intervals of about five years to ascertain if Ribes regrowth is a menace to the pines.)

In the unprotected areas studied during 1937, a total of 88 plots, comprising 85 $\frac{1}{2}$ acres, were laid out in 61 townships in five of the Northeastern States. Out of a total of 68,829 pines examined, 14,132, or 20.5% of the trees were infected with 23,108 blister rust cankers. Over 54% of these cankers originated after 1930, which shows the danger of delaying protection measures.

State and Local Cooperation on W.P.A. Program

The states and local cooperators continued to give good support to the W.P.A. projects in this Region during 1938, as evidenced by a total expenditure of \$40,149.80 to supplement the W.P.A. funds. This amount includes contributions by three states, three counties, 26 towns, and 145 individuals.

State funds were used chiefly for field supervision and checking, crew foremen, transportation, and a small amount for equipment. The county and town expenditures were mainly for transportation of W.P.A. crews. In several instances, the continuance of the W.P.A. control projects in these localities depended primarily on this cooperation, as adequate W.P.A. funds were not available for transportation. Cooperation by private land owners under the W.P.A. Program represents the cost of additional labor furnished by these individuals.

Tables 57 and 58 show the amount of state and local cooperative funds spent in conjunction with the W.P.A. Program during 1938 and the period 1935-1938, inclusive.

Table 57 - State and Local Cooperative Funds Spent in Conjunction With W.P.A. Program in Northeastern States During 1938

State	State Funds	County Funds		Town Funds		Individual Funds		Total
		No. Counties	Amount	No. Towns	Amount	No. Indiv.	Amount	
Maine	1,466.39	"	"	13	1,832.42	"	"	3,298.81
N.H.	"	2	567.64	3	662.75	"	"	1,230.39
Vt.	"	"	"	5	1,971.98	"	"	1,971.98
Mass.	1,915.24	"	"	4	3,280.28	145	612.76	5,808.30
R.I.	"	"	"	"	"	"	"	"
Conn.	"	"	"	1	675.00	1	8.00	683.00
N.Y.	26,781.84	1	320.00	"	"	"	"	27,101.84
N.J.	"	"	"	"	"	"	"	"
Penna.	"	"	"	"	"	1	55.60	55.60
Totals	30,163.47	3	887.64	26	8,422.43	146	676.26	40,149.80

Table 58 - State and Local Cooperative Funds Spent in Conjunction With W.P.A. Program in Northeastern States, 1935-1938, Inclusive

State	State Funds	County Funds		Town Funds		Indiv. Funds		Total
		No. County Contributions	Amount	No. Town Contributions	Amount	No. Indiv.	Amount	
Me.	8,701.64	"	"	30	3,534.47	2	20.25	12,256.36
N.H.	2,058.94	5	1,654.14	18	1,327.50	"	"	5,740.58
Vt.	467.90	"	"	33	15,585.43	"	"	16,053.33
Mass.	6,245.09	"	"	24	12,223.35	381	1898.56	20,366.99
R.I.	1,114.98	"	"	"	"	"	"	1,114.98
Conn.	1,525.93	"	"	2	851.00	1	8.00	2,384.93
N.Y.	97,174.34	2	336.00	"	"	2	254.40	97,764.74
N.J.	941.86	"	"	"	"	"	"	941.86
Pa.	336.70	"	"	"	"	5	307.50	644.20
Totals	118,567.38	7	1,990.14	107	33,521.75	391	2,489.01	153,068.28

Table 59 - W.P.A. Allotments For Blister Rust Control in Northeastern States, 1935-1938, Inclusive

Appropriation 001089

State	Maine	N.H.	Vt.	Mass.	R.I.	Conn.	N.Y.	Penn.	Totals
Original allotment(1)	255,262.00	250,587.00	151,283.00	157,669.00	20,212.00	51,127.00	421,804.00	2958.00	200,749.00 1,511,651.00
Rescission-6/10/36	31,500.00	35,000.00	22,500.00	20,000.00	3,000.00	6,000.00	56,500.00	-	32,000.00 203,500.00
Increase-7/8/36	26,000.00	18,500.00	13,000.00	13,000.00	2,000.00	3,500.00	37,000.00	1000.00	18,000.00 132,000.00
Rescission-10/20/37	199.51	199.56	98.28	400.00	54.43	100.68	174.31	64.51	75.53 1,366.91
Rescission-9/15/38	-	-	-	.03	-	.05	.55	-	- .43
Total Funds-001089	249,562.49	233,887.44	141,684.72	150,268.97	19,157.52	48,526.27	402,129.34	3893.49	186,673.41 1,435,783.61

Appropriation 201085

Original allotment(2)	53,600.00	34,100.00	16,200.00	23,500.00	4,500.00	2,300.00	91,700.00	800.00	24,500.00 251,200.00
Increase-8/24/36	-	25,300.00	10,000.00	-	-	-	25,000.00	-	7,500.00 67,800.00
Rescission-8/24/36	3,300.00	-	-	-	-	1,600.00	-	-	- 4,900.00
Increase-9/15/36	46,500.00	52,600.00	33,200.00	30,000.00	2,900.00	7,000.00	69,000.00	600.00	37,000.00 278,800.00
Increase-11/27/36	-	-	-	5,000.00	1,000.00	1,000.00	10,000.00	-	1,000.00 18,000.00
Rescission-11/27/36	-	14,000.00	3,000.00	-	-	-	-	-	- 17,000.00
Rescission-12/31/36	-	-	3,340.00	-	-	-	4,000.00	-	- 7,340.00
Increase-1/4/37	-	-	-	-	-	310.00	-	-	- 310.00
Increase-1/15/37	-	-	3,000.00	-	-	-	-	-	- 3,000.00
Rescission-1/15/37	-	-	-	-	-	-	-	-	- 3,000.00
Increase-2/13/37	8,100.00	5,600.00	4,400.00	2,100.00	-	900.00	16,920.00	-	4,000.00 42,020.00
Increase-3/8/37	9,510.00	9,400.00	7,750.00	11,730.00	430.00	1,550.00	17,750.00	140.00	6,740.00 65,000.00
Increase-5/12/37	10,690.00	10,020.00	6,240.00	5,820.00	430.00	1,250.00	14,960.00	140.00	5,450.00 55,000.00
Rescission-10/12/37	2,000.00	2,200.00	2,800.00	4,100.00	60.00	825.00	3,500.00	75.00	3,800.00 19,330.00
Rescission-7/27/38	312.00	153.00	245.00	487.00	-	118.00	468.00	-	273.00 2,054.00
Total Funds-201085	122,788.00	120,567.00	71,407.00	73,563.00	9,200.00	11,767.00	237,562.00	1605.00	79,117.00 727,476.00

Appropriation 501082

Original allotment(3)	39,720.00	41,370.00	28,610.00	39,550.00	1,550.00	4,130.00	76,120.00	1580.00	29,740.00 262,370.00
Increase-10/1/37	-	-	-	-	-	-	-	260.00	- 260.00
Rescission-10/1/37	-	-	-	260.00	-	-	-	-	- 260.00
Rescission-11/10/37	-	-	-	1,000.00	-	-	-	-	- 1,000.00
Increase-11/10/37	-	-	-	-	-	-	1,000.00	-	- 1,000.00
Increase-12/6/37	-	-	1,000.00	-	-	-	-	-	- 1,000.00
Rescission-12/6/37	-	-	-	-	-	-	-	-	- 1,000.00
Rescission-12/17/37	-	200.00	-	100.00	-	-	200.00	-	1,400.00 1,900.00
Increase-1/7/38	24,958.00	27,891.00	17,475.00	-	-	5,140.00	56,786.00	1080.00	18,134.00 177,000.00
Rescission-5/28/38	-	-	-	-	-	-	-	1080.00	- 1,030.00
Increase-5/28/38	-	-	-	500.00	580.00	-	-	-	- 1,080.00
Total Funds-501082	64,678.00	69,061.00	48,983.00	65,130.00	3,228.00	9,270.00	133,706.00	1840.00	45,474.00 439,370.00

(1) July 22, 1935. (2) July 28, 1936. (3) July 10, 1937.

W.P.A. Allotments For Blister Rust Control in Northeastern States, 1935-1938, Inclusive (Continued)

Appropriation 701082

State	Maine	H.H.	Vt.	Mass.	R.I.	Conn.	N.Y.	N.J.	Penna.	Totals
Original Allotment	10,308.00	9,495.00	6,010.00	11,245.00	928.00	1,385.00	16,838.00	-	7,310.00	63,516.00
Increase-8/16/38	41,250.00	42,400.00	27,398.00	45,303.00	1,856.00	7,558.00	75,395.00	-	29,963.00	270,916.00
Total Funds-701082	51,558.00	51,893.00	33,408.00	56,554.00	2,784.00	9,741.00	92,223.00	-	37,273.00	334,432.00

Recapitulation

701089	249,562.49	235,607.44	141,634.72	160,268.97	19,157.52	40,526.27	402,129.34	3893.49	136,673.41	1,436,130.85
701085	122,788.00	120,667.00	71,407.00	73,563.00	9,200.00	11,767.00	237,362.00	1605.00	79,117.00	727,475.00
701082	64,678.00	69,081.00	48,983.00	63,130.00	3,228.00	9,270.00	133,706.00	1840.00	45,474.00	439,310.00
701082	51,558.00	51,893.00	33,408.00	56,554.00	2,784.00	9,741.00	92,223.00	-	37,273.00	334,432.00
Grand Totals	488,586.49	475,508.44	295,482.72	345,516.97	34,369.52	78,304.27	865,420.34	7338.49	348,537.41	2,934,107.00

W.P.A. Administrative Allotments in Northeastern States
(1937-1938, Inclusive)

Year	Appropriation Number	Amount
1937	501009	5,840.00
1938	01-06/8999	3,600.00
1938	701089 (Original allotment)	285.00
1938	701089 (Increase on 7/26/38)	285.00
1938	701009 (Original allotment)	1,870.00
1938	701009 (Increase on 9/20/38)	1,900.00
Total of all administrative allotments		\$13,780.00

Table 60 - Total W.P.A. Expenditures During Calendar Year 1938 For The Various Blister Rust Control Projects in The Northeastern States.

State	Supervision Agent Activities	Eradication Assistants and Checkers	Ribes Eradication	Black Currant Elimination	Nursery Sanitation	Blister Rust Canker Elimination	Field Data		Total
							Mapping	General	
Maine	6,713.74	-	34,731.56 (1)	-	-	-	24,968.67	35.68	66,449.56
N.H.	7,576.47	-	52,410.60	-	-	-	24,075.38	4,166.96	68,227.99
Vt.	6,915.69	-	24,912.46	-	-	1,262.26	9,586.10	2,293.42	44,959.92
Mass.	5,733.30	396.95 (2)	36,491.68	508.35	190.93	102.78	14,859.93	475.46	58,730.04
R.I.	377.74 (3)	-	3,261.97	-	170.84	-	-	-	4,110.55
Conn.	2,240.87	-	8,025.01	-	-	-	3,669.16	-	11,935.04
N.Y.	14,055.89	480.34 (4)	76,362.56	-	421.09	7,945.95	19,059.44	10,762.00	129,087.26
Penn.	12.65	-	-	-	-	-	-	-	-
Totals	52,330.02	877.29	243,662.81	508.35	893.60	14,268.11	102,432.74	17,733.52	432,686.44

- (1) Includes \$19.03 W.P.A. funds expended under Regular Cooperative Program.
 (2) Spent in conjunction with C.C.C. Program.
 (3) Includes \$61.21 expended out of Cambridge Office administrative allotment.
 (4) Includes \$210.56 W.P.A. funds expended in conjunction with C.C.C. Program, and \$269.78 W.P.A. funds spent in connection with S.C.S. Program.

In addition to the expenditures listed in Table 60, W.P.A. obligations for the Cambridge, Massachusetts regional office during the calendar year 1938 were as follows:

Source of Funds		Wages of		Salaries of		Total	
		Relief Labor		Appointees		Expenses	
Massachusetts allotment.....		\$7,137.96		\$788.32		\$2,114.02	
Administrative allotment.....		-		4,920.71		1,590.31	
Totals.....		\$7,137.96		\$5,604.03		\$3,704.33	
						\$10,055.30	
						\$6,411.02	
						\$16,446.32	

Table 61 - Total W.P.A. Expenditures For The Various Blister Rust Control Projects in The Northeastern States During Period 1935-1938, Inclusive.
(By States)

State	Supervision and B.R.C. Agent Activities	Eradication Assistants and Checkers	Ribes Eradication	Black Currant Elimination	Nursery Sanitation	Blister Rust Canker Elimination	Field Data		Total
							Mapping	General	
Ala.	36,449.25	19,911.38	329,719.69(1)	-	-	-	89,919.82	2,257.61	479,250.66
N.H.	40,002.95	18,730.43	301,447.40	-	420.12	779.37	88,059.96	13,708.16	463,110.23
N.Y.	29,487.16	12,371.02	183,175.88	-	218.27	6,176.91	49,790.04	7,099.54	288,910.82
Mass.	29,603.43	7,181.57(2)	177,159.86	2,764.95	1,138.43	7,724.45	49,120.98	2,893.87	277,630.60
N.I.	2,201.23(3)	-	28,393.56	-	263.56	-	3,443.36	-	31,301.71
Conn.	6,060.07	2,383.15	51,817.45	-	171.59	-	12,369.72	3,574.74	76,176.78
N.J.	74,640.42	22,329.91(4)	594,798.26(5)	-	1,646.41	40,280.53	95,939.82	14,189.13	845,914.57
N.J.	818.46	991.26	5,493.66	-	-	-	-	-	1,308.38
Penn.	50,725.45	15,953.23	241,865.45	-	836.29	3,075.99	43,657.45	-	341,114.81
Totals	249,988.42	99,854.94	1,913,870.19	2,764.95	4,694.72	63,037.05	432,301.15	43,523.35	2,810,000.00

- (1) Includes \$38.05 W.P.A. funds expended under Regular Cooperative Program.
 (2) Includes \$948.45 W.P.A. funds expended under C.C.C. Program.
 (3) Includes \$61.11 expended out of Cambridge Office administrative allotment.
 (4) Includes \$300.80 W.P.A. funds expended under C.C.C. Program and \$269.78 under S.C.S. Program.
 (5) Includes \$245.76 W.P.A. funds expended under S.C.S. Program.

In addition to the expenditures listed in Table 61, W.P.A. obligations for the Cambridge, Massachusetts regional office during the period 1935-1938, inclusive, were as follows:

Source of Funds	Wages of		Salaries of		Total	
	Relief Labor	Non-Relief Labor	Appointees	Expenses	Total	Total
Massachusetts allotments.....	\$ 53,597.53	\$ 72.25	\$ 8,065.91	\$ 10,735.36	\$ 52,471.04	
Administrative allotments.....	-	-	8,347.32	3,677.05	12,024.37	
Totals.....	\$ 53,597.53	\$ 72.25	\$ 16,413.23	\$ 14,412.40	\$ 64,495.48	

PERCENTAGE OF TOTAL A.P.A. CONTRIBUTIONS TO ERADICATION OF BACTERIAL STAINING PLANT AND BARK DISEASE

1200000

Black Current Elimination - Nursery Cultivation - Blister Rust Control Elimination

Eradication Assistants and Checkers

General Supervision and Blister Rust Control Agent Activities

Field Data (Pre-eradication surveys and plot studies)

Ribes Eradication

Calendar Year 1938

July 29, 1935 - December 31, 1938, Inclusive

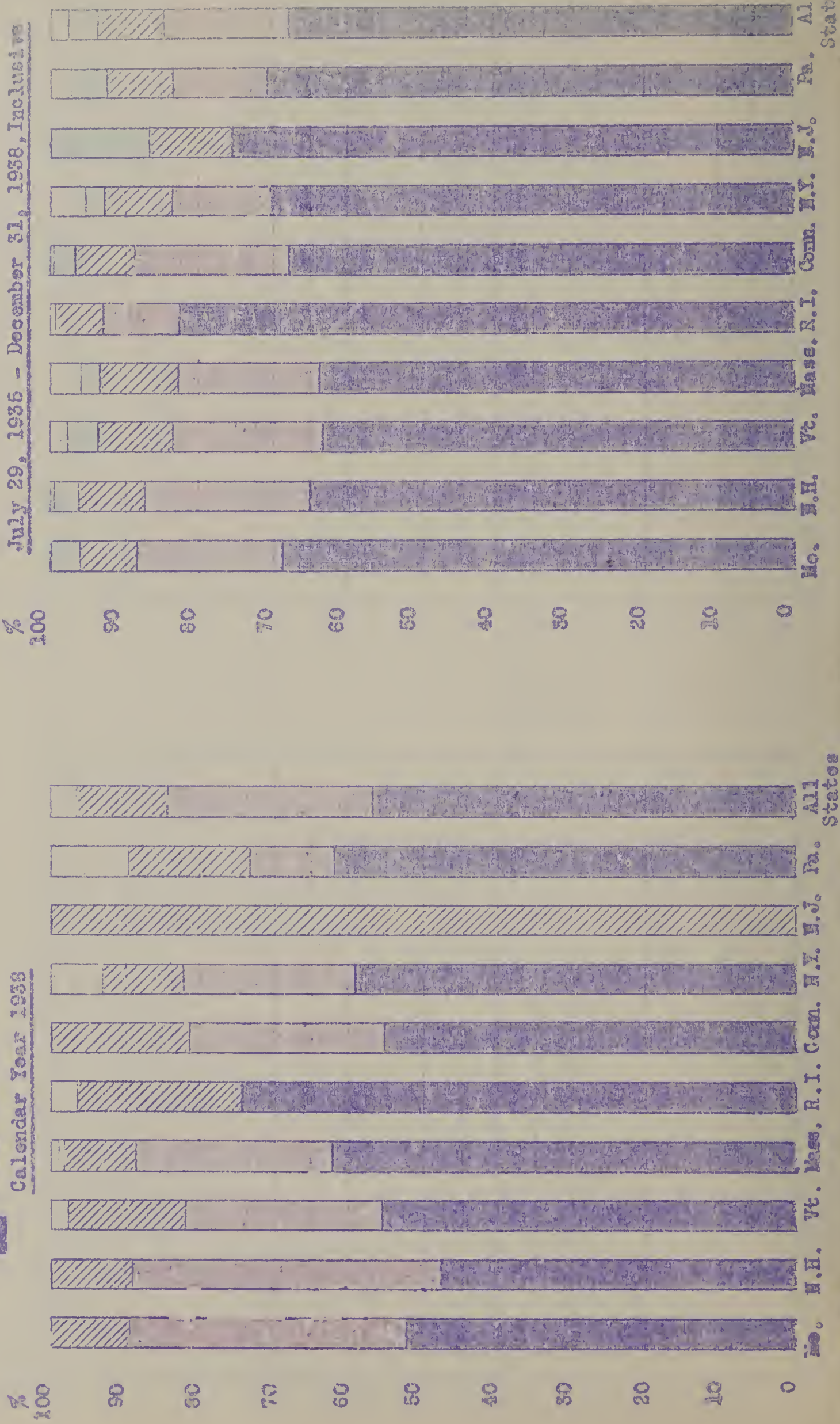


Table 62 - Total Expenditures, By Cooperating Agencies, Under W.P.A. Program in Northeastern States During Calendar Year 1938.

State	State Funds	Towns	Individuals	Counties	B.E. & P.Q.	W.P.A.	Total
Maine	1,466.39	1,832.42	-	-	-	66,430.52(1)	69,729.33
N.H.	-	662.75	-	567.64	-	68,227.58	69,457.77
Vt.	-	1,971.98	-	-	-	44,959.92	46,931.90
Mass.	1,915.24	3,280.28	612.76	-	44.77	58,353.09(2)	64,186.14
R.I.	-	-	-	-	-	4,410.27(3)	4,410.27
Conn.	-	675.00	5.00	-	-	11,934.54	12,614.54
N.Y.	26,781.94	-	-	320.00	-	128,606.91(4)	155,708.85
N.J.	-	-	-	-	-	12.66	12.66
Penna.	-	-	55.50	-	-	48,874.83	48,930.33
Totals	30,163.47	8,422.43	676.26	887.64	44.77	481,790.12	471,934.69

(1) In addition \$19.03 W.P.A. funds were expended for Ribes eradication project under Regular Cooperative Program.

(2) In addition \$396.95 W.P.A. funds were expended for eradication assistants and checkers under C.C.C. Program.

(3) Includes \$61.11 expended for state leader's salary out of Cambridge Office WPA administrative allotment.

(4) In addition \$210.56 W.P.A. funds were expended for eradication assistants and checkers under C.C.C. Program and \$269.78 for the same project under the S.C.S. Program.

Table 63 - Total Cooperative Expenditures, By Projects, Under W.P.A. Program in Northeastern States During Calendar Year 1938.

State	Supervision and B.R.C. Agent Activities	Ribes Eradication	Erad. Assistants and Checkers	Black Currant Elimination	Nursery Sanitation	Ribes contamination	Blister Rust Canker Elimination	Field Data		Total
								Mapping	General	
Maine	6,713.74	36,724.66	1,195.88	-	-	-	-	25,059.37	35.68	69,729.33
N.H.	7,576.47	32,894.80	-	-	-	-	-	24,748.70	4,237.80	69,457.77
Vt.	6,915.69	26,370.54	-	-	-	-	1,277.26	10,074.99	2,293.42	46,931.90
Mass.	5,733.90	40,986.30	-	511.56	213.94	-	396.78	15,233.51	610.16	64,186.14
R.I.	977.74	3,261.97	-	-	170.66	-	-	-	-	4,410.27
Conn.	2,240.37	6,535.01	-	-	-	-	-	3,844.16	-	12,614.54
N.Y.	14,055.39	89,247.72	6,454.12	-	561.09	-	8,522.63	22,436.57	14,440.63	155,708.85
N.J.	12.66	-	-	-	-	-	-	-	-	12.66
Penna.	3,105.51	29,466.86	-	-	176.46	-	4,967.14	6,236.19	-	48,930.33
Totals	63,130.02	265,476.98	7,650.00	511.56	1,112.06	-	15,654.01	107,633.49	21,617.59	471,934.69

In addition to the expenditures listed above, W.P.A. obligations for the Cambridge, Massachusetts regional office for the year 1938 amounted to \$15,440.12. Out of this total, \$10,055.50 was derived from the Massachusetts State Department of Agriculture and \$5,384.62 was provided from W.P.A. administrative funds.

Table 64 - Total Expenditures, By Cooperating Agencies, Under W.P.A. Program in Northeastern States During Period 1935-1938, Inclusive

State	State Funds	Towns	Individuals	Counties	B.E. & P.Q.	W.P.A.	Total
Maine	8,701.64	3,534.47	20,25	-	17.60	478,222.62(1)	490,496.58
N.H.	2,058.94	1,327.50	-	1,654.14	208.90	463,148.39	468,394.87
Vt.	467.90	15,585.43	-	-	-	288,319.22	304,372.56
Mass.	6,245.09	12,223.35	1,898.83	-	50.28	276,638.13(2)	297,055.71
N.I.	1,114.98	-	-	-	-	34,301.71(3)	35,416.69
Conn.	1,525.93	851.00	8.00	-	690.29	76,176.72	79,251.94
N.Y.	37,174.34	-	254,710	356.00	25.11	843,007.93(4)	940,797.78
N.J.	941.86	-	-	-	-	7,303.37	8,245.23
Pa.	336.70	-	307.60	-	4.00	341,113.86	341,762.06
Totals	118,567.39	33,521.75	2,439.01	1,990.14	936.18	2,808,231.95	2,965,194.41

(1) In addition, \$38.03 W.P.A. funds were expended in conjunction with Regular Cooperative Program.

(2) In addition, \$948.45 W.P.A. funds were expended in conjunction with C.C.C. Program.

(3) Includes \$61.11 expended for state leader's salary out of Cambridge Office W.P.A. administrative allotment.

(4) In addition, \$300.80 W.P.A. funds were expended in conjunction with C.C.C. Program and \$515.54 with S.C.S. Program.

Table 65 - Total Cooperative Expenditures, By Projects, Under W.P.A. Program in Northeastern States During Period 1935-1938, Inclusive.

State	Supervision and B.R.C. Agent Activities	Ribes Eradication	Eradication Assistants and Checkers	Black Currant Elimination	Nursery Sanitation	Ribes Compensation	Blighter Rust Canker Elimination	Field Data		Total
								Mapping	General	
Maine	36,449.25	337,215.40	22,188.56	-	-	-	-	92,385.86	2,257.51	490,496.58
N.H.	40,002.96	303,956.33	20,518.58	-	420.13	-	779.37	88,917.70	13,799.82	488,594.87
Vt.	29,487.16	197,155.53	12,491.08	-	242.27	-	6,602.41	50,774.13	7,639.94	304,372.56
Mass.	29,603.43	192,225.24	8,233.12	3,011.05	1,609.91	225.60	9,029.43	52,089.36	3,028.57	297,055.71
N.I.	2,201.23	28,688.29	-	-	255.56	-	-	4,263.61	-	35,416.69
Conn.	6,060.07	52,566.98	2,783.10	-	171.59	-	-	13,584.71	4,085.49	79,251.94
N.Y.	74,640.42	632,161.99	39,543.21	-	1,956.17	-	41,822.15	101,007.34	19,666.50	940,797.78
N.J.	818.46	5,791.76	1,535.01	-	-	-	-	-	-	8,245.23
Pa.	30,725.45	242,202.15	16,953.23	-	1,143.79	-	3,075.99	43,661.45	-	341,762.06
Totals	249,988.42	2,021,343.70	121,345.89	3,011.05	5,607.41	225.60	66,309.35	446,684.16	50,477.83	2,965,194.41

In addition to the expenditures listed above, W.P.A. obligations for the Cambridge, Massachusetts regional office during the period 1935-1938, inclusive, amounted to \$64,495.41. Of this total, \$52,471.04 was derived from the Massachusetts field allotments, while \$12,024.37 was expended from W.P.A. administrative allotment.

Table 66 - W.P.A. Obligations For Relief and Wages
Calendar Year 1938

State	Wages of Security-Wage Workers		Salaries of Appointees	Total Wages and Salaries
	Relief	Non-Relief		
Maine	57,332.38	-	3,299.92	60,631.30
N.H.	58,455.28	-	5,983.15	64,438.41
Vt.	38,094.39	-	3,899.88	41,994.27
Mass.	52,360.61	-	3,899.88	56,260.49
R.I.	3,408.84	-	877.74(1)	4,386.58
Conn.	9,623.88	-	1,811.00	11,234.88
N.Y.	113,767.53	-	9,641.87	123,408.90
N.J.	-	-	12.66	12.66
Penna.	40,726.99	274.93	4,416.52	45,417.44
Totals	373,767.68	274.93	33,742.12	407,784.73
% of Total	91.6	0.1	8.3	100.0

July 29, 1935 to December 31, 1938

Maine	372,771.93	28,285.96	40,428.18	442,466.05
N.H.	342,648.66	49,441.01	45,199.87	437,484.05
Vt.	227,829.11	14,344.13	27,601.31	269,874.84
Mass.	282,929.61	5,573.32	29,740.98	268,249.91
R.I.	29,166.31	2,427.54	2,144.33(1)	33,738.21
Conn.	63,272.17	1,198.93	5,161.50	69,632.60
N.Y.	710,761.27	27,458.07	82,552.64	820,800.08
N.J.	5,441.91	-	1,548.71	6,990.62
Penna.	276,284.34	11,598.97	33,943.55	321,826.86
Totals	2,261,390.50	141,312.22	268,360.48	2,671,063.20
% of Total	84.7	5.3	10.0	100.0

(1) Includes \$61.11 paid out of Cambridge Office administrative allotment

In addition to the expenditures listed above, W.P.A. obligations for the Cambridge, Massachusetts regional office were as follows:

Source of Funds	Period	Wages of Security Wage Workers		Salaries of Appointees	Total
		Relief	Non-Relief		
Massachusetts Allotment	(Calendar year 1938.....	7,137.96	-	783.32	7,921.28
	(July 29, 1935 to				
	(12/31/38.....	33,697.53	72.26	8065.91	41,735.69
Administrative Allotment	(Calendar year 1938.....	-	-	4,820.71	4,820.71
	(7/29/36-12/31/38	-	-	8,347.32	8,347.32
Totals	(Calendar year 1938.....	7,137.96	-	5,604.03	12,741.99
	(July 29, 1935 to Dec. 31, 1938.....	33,697.53	72.26	16,413.23	50,083.01

Table 67 - W.P.A. Obligations For Expenses

Calendar Year 1938

State	Purchases	Travel		Total
		Appointees	Crew Transportation	
Maine	3,237.36	783.52	1,797.39	5,818.26
N.H.	1,945.89	428.74	1,414.84	3,788.97
Vt.	2,506.48	414.39	44.80	2,965.65
Mass.	2,297.18	172.39	"	2,469.55
R.I.	1.17	"	22.72	23.89
Conn.	617.81	181.86	"	699.66
N.Y.	4,223.48	879.89	570.00	5,678.35
N.J.	"	"	"	"
Penna.	1,409.72	859.64	1,188.03	3,457.39
Totals	16,143.52	3,720.42	5,037.77	24,901.71
% Totals	64.8	14.9	20.3	100.0

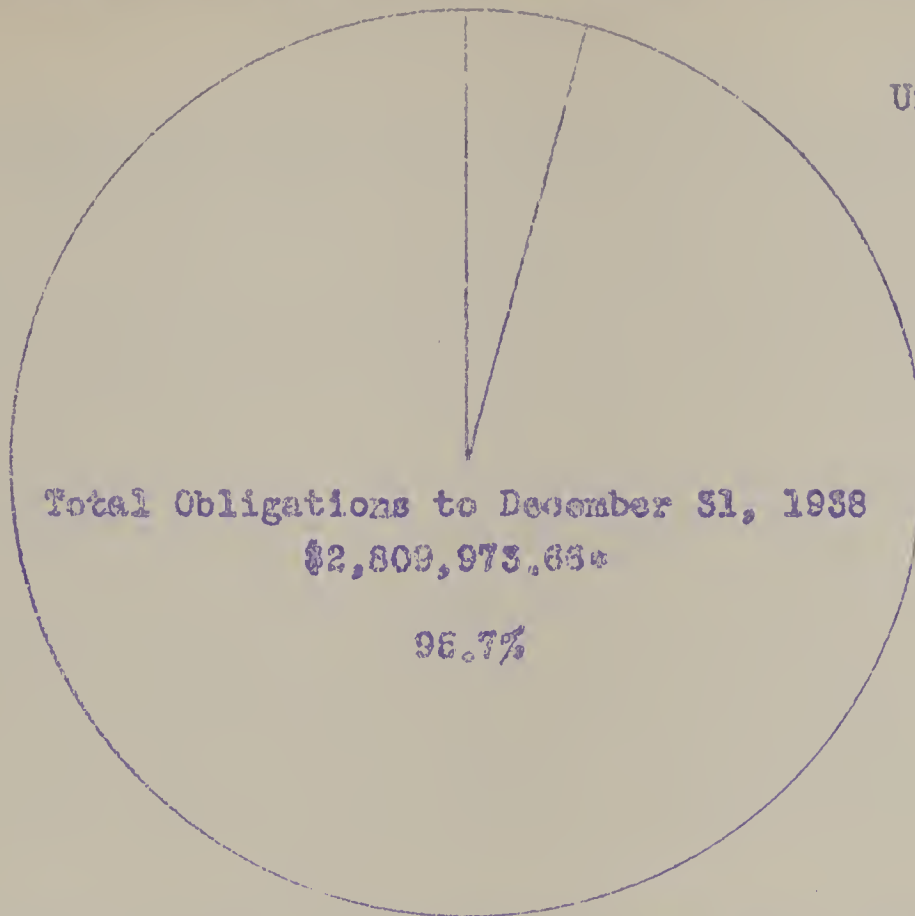
July 29, 1935 to December 31, 1938

Maine	12,187.49	8,526.30	15,230.81	35,794.60
N.H.	7,077.45	5,821.83	12,765.08	25,664.36
Vt.	9,120.62	6,710.89	3,612.87	18,444.38
Mass.	6,850.51	2,134.52	351.64	9,336.67
R.I.	28.76	.50	554.24	583.50
Conn.	3,023.28	2,130.68	1,390.18	6,544.12
N.Y.	14,603.34	4,861.52	3,559.35	23,024.19
N.J.	131.23	181.52	"	312.75
Penna.	6,989.64	6,130.93	7,166.48	19,287.00
Totals	60,012.20	34,298.74	44,660.63	138,971.57
% Total	43.2	24.7	32.1	100.0

In addition to the obligations listed above, W.P.A. expenses for the Cambridge, Massachusetts regional office were incurred as follows:

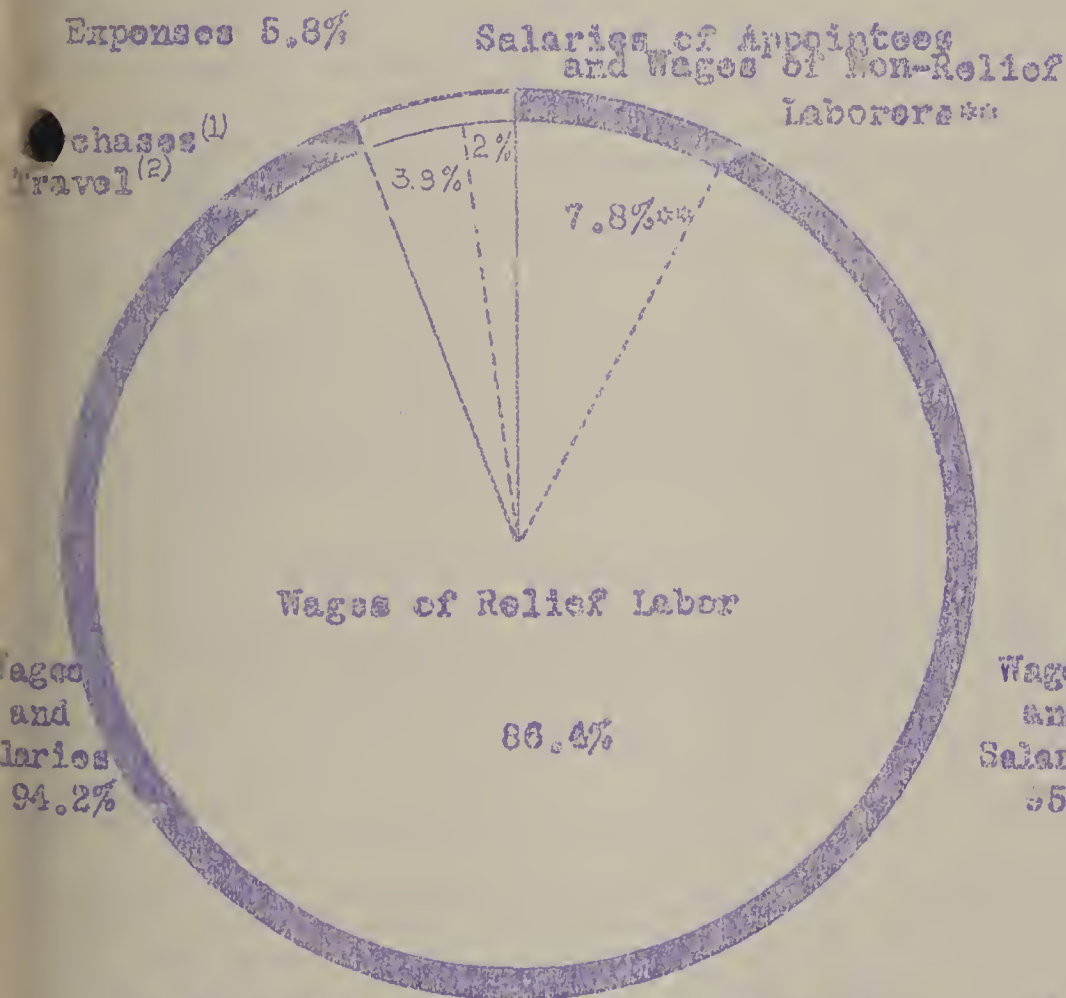
Source of Funds	Calendar Year 1938	July 29, 1935 to Dec. 31, 1938
Massachusetts allotments.....	\$ 2,114.02	\$ 10,735.35
Administrative allotments.....	1,690.31	3,677.05
Totals.....	\$ 3,704.33	\$ 14,412.40

W.P.A. FUNDS FOR BLAST RUST CONTROL IN NORTHEASTERN STATES



Unobligated Balance 4.3%
12/31/38
\$127,089.99

Total W.P.A. Allotments - 1935 to February 23, 1939, Inclusive - \$2,937,063.65*



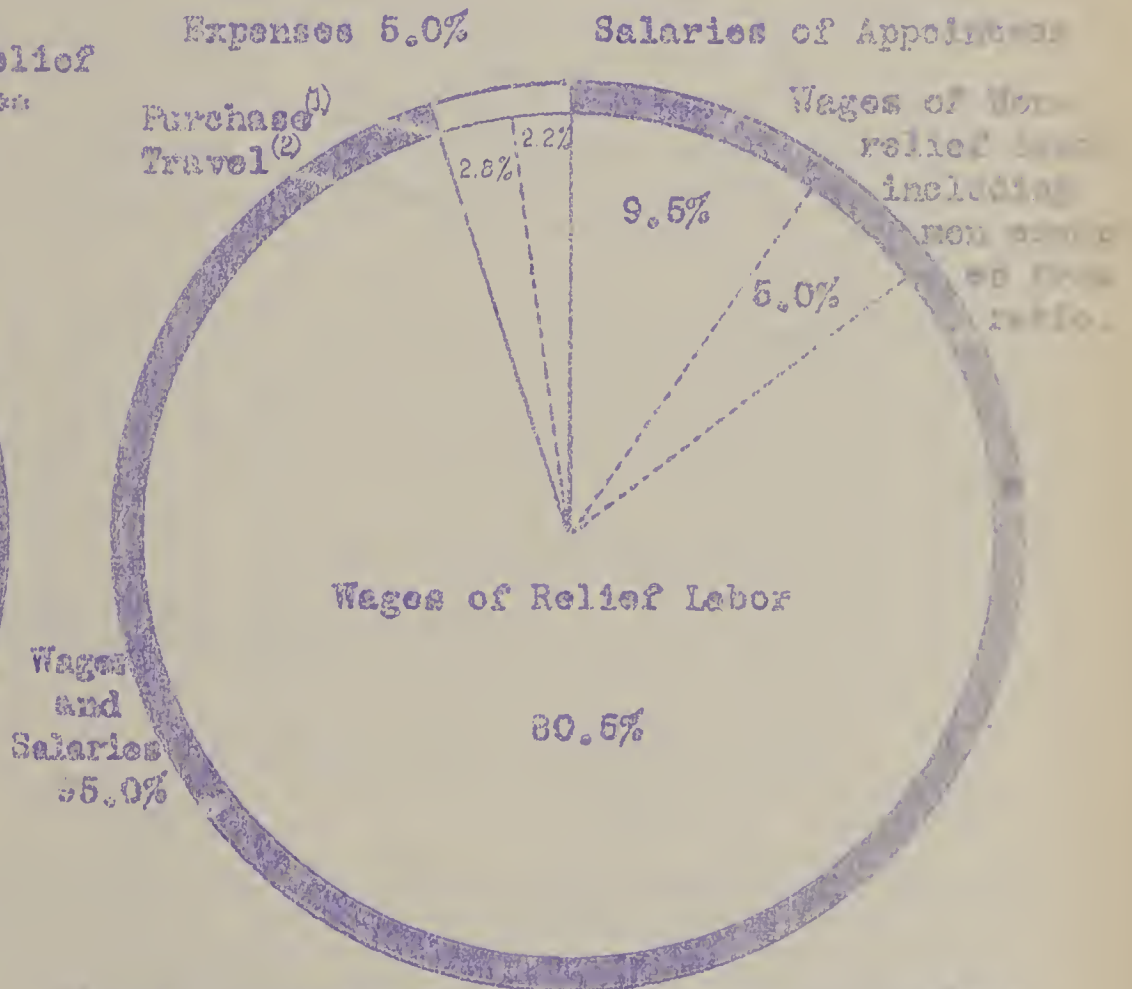
Total Obligations - Calendar Year 1938
\$432,625.33

*In addition \$13,780.00 administrative funds were made available as of July, 1, 1937 of which \$12,085.48 was obligated to December 31, 1938.

**Wages of non-relief laborers amount to only 0.06% of total.

(1) Supplies, materials and equipment (1034 vouchers).

(2) Travel, subsistence and miscellaneous (1012 vouchers). For all supervisory personnel also all transportation for W.P.A. crews.



Total Obligations - 1935 to 1938, Inclusive
\$2,809,973.66

BLISTER RUST CONTROL ACTIVITIES UNDER STATE AND LOCAL W.P.A. PROGRAMS

The special blister rust control project under the State W.P.A. Program in Connecticut was continued throughout the calendar year 1938. The primary purpose of this special project was to map the white pine areas and obtain information on blister rust infection conditions in the southern part of the state where very little control work has been performed in previous years. Such data were desired in order to develop a blister rust control policy and intelligently plan future control work. Up to April 30, 1939, the mapping work had been completed in all but two townships in the state as a result of the activities under the various emergency programs. In addition to the mapping and pine infection surveys, a considerable amount of Ribes eradication work was performed under the State W.P.A. Program in Connecticut during 1937 and 1938. During the latter year control projects were conducted in 10 townships where it was not practicable to do the work under any of the other programs. A total of 54 W.P.A. workers were employed on this special project in Connecticut under the direction of three district supervisors. In addition, one state supervisor was employed to give direct supervision to the entire project and handle all administrative matters. The state blister rust control leader cooperated in developing plans for the project and giving technical supervision to the field activities.

A special project was also conducted during 1938 under the State W.P.A. Program in Pennsylvania where the Ribes were removed from a 900 foot protection zone around the pine areas on the Cook Forest located in Clarion, Forest, and Jefferson Counties. This project was applied for in 1933 and finally approved and carried out in 1938. The state blister rust leader gave technical supervision to the work which was under the immediate direction of the local district forester. A total of 50 laborers were employed and the work was performed during the period June 14 to September 30. All of the foremen and many of the laborers assigned to the project had previous experience on Ribes eradication work under the Federal W.P.A. Program in that district.

Tables 68 and 69 summarize the results of the Ribes eradication work under the State W.P.A. Program in Connecticut and Pennsylvania during 1938 and the totals for the Region during period 1936-1938, inclusive. The results reported for New York represent a local W.P.A. project conducted during 1937 under the supervision of one of the district blister rust control leaders.

Table 68- Summary of Ribes Eradication Work Under State
W.P.A. Program in Connecticut and Pennsylvania During 1938.

Type of Erad.	Total Acreage		Ribes Pulled		Total Man Days	Cost				Per Acre	
	Worked	Pine Pro- tected	Wild	Cult.		Indiv.	Towns	W.P.A.	Total	Cost	Ribes
Initial	4,278	536	5,042	1590	790	239.85	23.75	4,189.62	4,453.22	1.04	1.2
Re-Erad.	17,131	2652	159,025	644	3180	-	1508.25	16,046.09	16,552.34	.966	9.3
Total	21,404	3188	164,067	2234	3970	239.85	1530.00	19,235.71	21,005.56	.981	7.7
Initial	2,315	-	915,233	-	1993	-	-	8,134.00	8,134.00	3.51	395.3
Re-Erad.	629	-	69,201	-	311	-	-	1,266.00	1,266.00	2.01	110.0
Total	2,944	-	984,434	-	2304	-	-	9,400.00	9,400.00	3.19	334.4
Initial	6,588	536	920,275	1590	2783	239.85	23.75	12,323.62	12,587.22	1.91	139.7
Re-Erad.	17,760	2652	228,226	644	3491	-	1508.25	16,312.09	17,818.34	1.00	12.9
Total	24,348	3188	1,148,501	2234	6274	239.85	1530.00	28,635.71	30,405.56	1.25	47.2

Basis of costs: Includes total cost of laborers and foremen employed in locating and pulling Ribes; transportation of crews; and miscellaneous expenses for trail paper, picks, etc. Cost of any supervisors assigned to project not included.

Table 69 - Summary of Ribes Eradication Work Under State and Local W.P.A. Programs in Northeastern States During Period 1936-1938, Inclusive.

(By Years)

Year	Type of Erad.	Total Acreage		Ribes Pulled		Total Man Days	Cost				Per Acre		
		Worked	Pine Pro-tested	Wild	Cult.		Local Coop.	State	W.P.A.	Total	Cost	Ribes	Days
1936	Initial	1,989	215	1,396	97	465	346.00	32.35	1,838.98	2,217.33	1.11	0.7	.23
	Re-Erad.	-	-	-	-	-	-	-	-	-	-	-	-
	Total	1,989	215	1,396	97	465	346.00	32.35	1,838.98	2,217.33	1.11	0.7	.23
1937	Initial	1,481	288	690	68	278	188.00	-	1,164.08	1,342.08	.906	0.5	.19
	Re-Erad.	26,555	4,348	43,013	301	1871	116.25	24.05	3,750.98	8,891.28	.335	1.6	.07
	Total	28,036	4,636	43,703	369	2149	304.25	24.05	9,905.06	10,233.36	.365	1.6	.07
1938	Initial	6,588	536	920,275	1590	2783	263.60	-	12,323.62	12,587.22	1.91	139.7	.42
	Re-Erad.	17,760	2,652	228,226	644	3491	1506.25	-	16,312.09	17,818.34	1.00	12.9	.20
	Total	24,348	3,188	1,148,501	2234	6274	1769.85	-	28,635.71	30,405.56	1.25	47.2	.20
Totals	Initial	10,058	1,039	922,361	1755	3526	797.60	32.35	15,316.68	16,146.63	1.61	91.7	.30
	Re-Erad.	44,315	7,000	271,239	945	5362	1622.50	24.05	25,063.07	26,709.62	.603	6.1	.13
	Total	54,373	8,039	1,193,600	2700	8888	2420.10	56.40	40,379.75	42,856.25	.788	22.0	.13

(By States)

Conn.	Initial	7,743	1,039	7,128	1755	1533	797.60	32.35	7,182.68	8,012.63	1.03	0.9	.20
	Re-Erad.	43,551	6,910	189,123	945	4947	1542.25	24.05	23,472.17	25,035.47	.575	4.3	.11
	Total	51,294	7,949	196,251	2700	6480	2339.85	56.40	30,654.85	33,051.10	.644	3.8	.13
N.Y.	Initial	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	135	90	12,915	-	104	80.25	-	324.90	405.15	3.00	95.7	.77
	Total	135	90	12,915	-	104	80.25	-	324.90	405.15	3.00	95.7	.77
Penn.	Initial	2,315	-	915,233	-	1993	-	-	8,134.00	8,134.00	3.51	395.3	.63
	Re-Erad.	629	-	69,201	-	311	-	-	1,266.00	1,266.00	2.01	110.0	.49
	Total	2,944	-	984,434	-	2304	-	-	9,400.00	9,400.00	3.15	334.4	.76
Totals	Initial	10,058	1,039	922,361	1755	3526	797.60	32.35	15,316.68	16,146.63	1.61	91.7	.30
	Re-Erad.	44,315	7,000	271,239	945	5362	1622.50	24.05	25,063.07	26,709.62	.603	6.1	.13
	Total	54,373	8,039	1,193,600	2700	8888	2420.10	56.40	40,379.75	42,856.25	.788	22.0	.13

Basis of costs: Same as Table 68.

Nursery Sanitation - State W.P.A. Program

No nursery sanitation work was performed during 1938 under the State W.P.A. Program. Sanitation work under this program during the period 1936-1938, inclusive, was restricted to Connecticut where seven laborers were used for 243 man days during 1937 re-examining the environs of five nurseries for Ribes. A total of 335 wild Ribes were destroyed on the 1788 acres examined at a total cost of \$1,184.20, all of which was paid from state W.P.A. funds.

Pine and Control Area Mapping - State W.P.A. Program

Pre-eradication survey work was conducted in 61 townships during 1938 under the State W.P.A. Program in Connecticut. As a result of 4,299 man days labor, a total of 80,634 acres was mapped in detail, many thousands of additional acres eliminated from control work since they did not contain sufficient pine to justify protection,

and 1,128 miles of control area boundary lines were painted in the field. Expenditures for this pre-eradication survey work in Connecticut during 1938 were as follows: - Town - \$912.50; State - \$30.75; State W.P.A. - \$22,587.90; Total - \$23,531.15.

Table 70 - Summary of Pine and Control Area Mapping Under State W.P.A. Program in Connecticut, 1936-1938, Inclusive.

Year	No. Towns	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Total Man Days	Cost			
						Towns	State	W.P.A.	Total
1936	5	36,706	-	-	580	40.70	31.68	2,851.57	2,923.95
1937	47	82,040	114,900	204.5	4,636	-	-	25,768.16	25,768.16
1938	61	80,634	-	1128	4,299	912.50	30.75	22,587.90	23,531.15
Totals	-	199,380	114,900	1332.5	9,515	953.20	62.43	51,207.63	52,223.26

Blown-Down Timber Mapping - State W.P.A. Program

Several of the State W.P.A. laborers in Connecticut also assisted on a survey to determine the amount of timber blown down in that state during the hurricane of September 21, 1938. The W.P.A. personnel surveyed conditions in nine of the more important white pine towns in the hurricane region and ascertained that practically 100% of stands over 10" in diameter were affected and 90% of the trees in these stands were down. This survey required 432 man days labor and cost \$2,724.13. Of this total \$87.50 was paid by one town and \$57.86 by the state. It is estimated that over 175,000,000 board feet of white pine timber was blown down by the hurricane in Windham, New London, Hartford, Tolland, New Haven, and Middlesex Counties. Very little damage occurred in Fairfield and Litchfield Counties, the latter being the most important white pine county in the state.

Special Field Studies - State W.P.A. Program

Two special field studies were also conducted during 1938 by employees assigned to the blister rust control project under the State W.P.A. Program in Connecticut. A white pine volume survey was made in the town of Cornwall where 1,564 plots containing 156.4 acres of white pine were examined. Practically all of the stands of mature pine in this township were sampled and it was ascertained that these tracts averaged 12,580 board feet of timber per acre. The data obtained on the survey in Cornwall will be used as a basis in estimating the volume of white pine timber in Connecticut. This volume study required 225 man days labor and cost \$972.73. Of this total, \$897.94 was paid from State W.P.A. funds, \$62.50 by towns, and \$12.29 by the state.

State W.P.A. laborers were also used for 909 man days during 1938 on a special study to determine the location and amount of one-year needle pines. This work was combined with a blister rust infection survey in Cornwall, Killingly and Voluntown. The total cost of this project was \$4,512.15, all of which was paid from State W.P.A. funds except \$912.50 contributed by towns and \$30.75 paid by the state. These investigations will be continued during the early part of 1939 and a separate report on the results of the entire study will be submitted by the state blister rust control leader.

Table 71 - Total Cooperative Expenditures, By Cooperating Agencies, Under State and Local W.P.A. Programs in Northeastern States

State	Year	Individuals	Towns	State	W.P.A.	Totals
Conn.	1938	239.85	2,780.00	218.25	58,370.12	61,608.20
	1936-1938	809.85	3,750.00	1,256.20	148,751.88	154,567.91
N.Y.	1938	-	-	-	-	-
	1936-1938	80.25	-	2.40	324.90	407.55
Penn.	1938	-	-	508.75	9,400.00	9,908.75
	1936-1938	-	-	508.75	9,400.00	9,908.75
Totals	1938	239.85	2,780.00	726.98	67,770.12	71,516.96
	1936-1938	890.10	3,750.00	1,767.55	158,476.78	164,884.21

Table 72 - Total Cooperative Expenditures, By Projects, Under State and Local W.P.A. Programs in Northeastern States.

State	Year	Ribes Eradication	Eradication Assistants and Checkers	Nursery Sanitation	Mapping		Field Studies	Total
					Pine and Control Area	Blown- Down Timber		
Conn.	1938	21,005.66	8,862.48	-	23,531.15	2724.13	5,484.88	61,608.20
	1936-1938	33,051.10	9,289.00	1,184.20	52,223.26	2724.13	56,096.22	154,567.91
N.Y.	1938	-	-	-	-	-	-	-
	1936-1938	405.15	2.40	-	-	-	-	407.55
Penn.	1938	9,400.00	508.75	-	-	-	-	9,908.75
	1936-1938	9,400.00	508.75	-	-	-	-	9,908.75
Totals	1938	30,405.66	9,371.23	-	23,531.15	2724.13	5,484.88	71,516.96
	1936-1938	42,856.25	9,800.15	1,184.20	52,223.26	2724.13	56,096.22	164,884.21

**BLISTER RUST CONTROL ACTIVITIES UNDER S.C.S. PROGRAM
IN NORTHEASTERN STATES**

Control projects were conducted in cooperation with the Soil Conservation Service during 1938 in New York and Pennsylvania. Ribes eradication work was performed from one S.C.S. camp in New York where 28 men, including several state foremen, were used on such activities in 6 townships from May 1 to September 30. The state also cooperated by furnishing a technical foreman for the project and one W.P.A. employee also assisted on the supervisory activities. In Pennsylvania, an average of 40 enlisted S.C.S. laborers and one technical foreman were assigned to Ribes eradication work from two camps. Control work was conducted in 6 townships during the period July 27 to October 5.

**Table 73 - Summary of Ribes Eradication Work Under S.C.S. Program
in Northeastern States During 1938.**

Type of Erad.	Acreage		Ribes Pulled		Total Man Days	Cost			Per Acre		
	Total Worked	Pine Protected	Wild	Cult.		State	S.C.S.	Total	Cost	Ribes	Da
Initial	3898	1,298	140,286	16	2446	1156.00	3665.48	4821.48	1.24	36.0	.
Re-Erad.	255	85	10,457	-	191	84.80	274.25	359.05	1.41	41.0	.
Total	4150	1,383	150,742	16	2736	1240.80	3939.73	5180.53	1.25	36.3	.
Initial	1288	55	101,072	-	1288	-	2004.95	2004.95	1.57	78.8	.
Initial	5178	1,353	241,357	16	3828	1156.00	5670.41	6826.41	1.32	46.6	.
Re-Erad.	255	85	10,457	-	191	84.80	274.25	359.05	1.41	41.0	.
Total	5433	1,438	251,814	16	4019	1240.80	5944.66	7185.46	1.32	46.3	.

Basis of costs:- Includes total time of enlisted personnel figured at rate of \$1.50 per eight hour man day, actual cost of other employees assigned to project, and cost of crew transportation.

Supervision of Ribes Eradication Work - S.C.S. Program

In New York, one state employee and one W.P.A. worker spent 216 man days supervising the S.C.S. control activities during 1938. A state checker also spent a few days inspecting the areas worked by the S.C.S. crews. The total supervisory costs for the S.C.S. activities in New York amounted to \$1,072.11 of which \$802.33 was paid from state funds and \$269.78 from the W.P.A. allotment. The work in Pennsylvania was directed by an S.C.S. technical foreman, a charge of \$234.00 being made for the 39 days this supervisor was assigned to the control project.

Table 74- Summary of Ribes Eradication Work Conducted Under S.C.S. Program in Northeastern States During Period 1936-1938, Inclusive.

By Years

Year	Type of Erad.	Total Acreage		Ribes Pulled		Total Man Days	State	W.P.A.	Cost		Per Acre		
		Worked	Pine Protected	Wild	Cult.				S.C.S.	Total	Cost	Ribes	Man Days
1936	Initial	4,112	143	67,793	155	1632	-	-	2,529.65	2,529.65	.615	16.5	.40
	Re-Erad.	214	26	2,190	-	410	-	-	635.73	635.73	2.97	10.2	1.92
	Total	4,326	169	69,983	155	2042	-	-	3,165.38	3,165.38	.732	16.2	.47
1937	Initial	2,921	1,206	149,324	45	1974	603.04	245.76	2,970.52	3,819.32	1.31	51.1	.68
	Initial	5,178	1,353	241,357	16	3628	1,156.00	-	5,670.41	6,926.41	1.32	46.6	.74
	Re-Erad.	255	85	10,457	-	191	84.80	-	274.25	359.05	1.41	41.0	.75
1938	Total	5,433	1,438	251,814	16	4019	1,240.80	-	5,944.66	7,185.46	1.32	46.3	.74
	Initial	12,211	2,702	458,474	216	7434	1,759.04	245.76	11,170.58	13,175.38	1.08	37.5	.61
	Re-Erad.	469	111	12,647	-	601	84.80	-	909.98	994.78	2.12	27.0	1.23
Totals	Total	12,680	2,813	471,121	216	8035	1,843.84	245.76	12,080.56	14,170.16	1.12	37.2	.63

By States

N.Y.	Initial	6,234	2,467	252,263	61	3870	1,759.04	245.76	5,627.10	7,631.90	1.22	40.5	.62
	Re-Erad.	255	85	10,457	-	191	84.80	-	274.25	359.05	1.41	41.0	.75
	Total	6,489	2,552	262,720	61	4061	1,843.84	245.76	5,901.35	7,990.95	1.23	40.5	.63
Pa.	Initial	5,977	235	206,211	155	3564	-	-	5,543.43	5,543.48	.929	34.5	.60
	Re-Erad.	214	26	2,190	-	410	-	-	635.73	635.73	2.97	10.2	1.92
	Total	6,191	261	208,401	155	3974	-	-	6,179.21	6,179.21	.998	33.7	.64
Totals	Initial	12,211	2,702	458,474	216	7,434	1,759.04	245.76	11,170.58	13,175.38	1.08	37.5	.61
	Re-Erad.	469	111	12,647	-	601	84.80	-	909.98	994.78	2.12	27.0	1.23
	Total	12,680	2,813	471,121	216	8035	1,843.84	245.76	12,080.56	14,170.16	1.12	37.2	.63

Basis of costs: Same as Table 73.

Nursery Sanitation - S.C.S. Program

S.C.S. laborers were used in New York during May, 1938 to re-examine 5,538 acres in the environs of the Painted Post and Tully nurseries, which have been leased by the state to the Soil Conservation Service for growing planting stock. Initial control work was also performed on 215 acres in the environs of the S.C.S. nursery at Mt. Eagle, Pennsylvania. Tables 75 and 76 summarize the results of the nursery sanitation work performed under the S.C.S. Program during 1938 and the totals for the period 1936-1938, inclusive.

Table 75 - Summary of Nursery Sanitation Work Conducted Under S.C.S. Program in Northeastern States During 1938.

State	Type of Erad.	No. Nurseries Worked	Acreage Worked	Ribes Pulled		Total Man Days	Cost			Per Acre		
				Wild	Cult.		State	S.C.S.	Total	Cost	Ribes	Ma Da
N.Y.	Re-Erad.	2	5,538	299	0	25	62.40	48.15	110.55	.020	0.05	.0
Penna.	Initial	1	215	0	3	19	29.00	55.30	84.30	.392	0	.0
	Initial	1	215	0	3	19	29.00	55.30	84.30	.392	0	.0
Totals	Re-Erad.	2	5,538	299	0	25	62.40	48.15	110.55	.020	0.05	.0
	Total	3	5,753	299	3	44	91.40	103.45	194.85	.034	0.05	.0

Basis of costs: Same as Table 73.

Table 76 - Summary of Nursery Sanitation Work Conducted Under S.C.S. Program in Northeastern States During Period 1936-1938, Inclusive

By Years

Year	Type of Erad.	Acreage Worked	Ribes Pulled		Total Man Days	Cost				Per Acre		
			Wild	Cult.		State	B.E. & P.Q.	S.C.S.	Total	Cost	Ribes	Ma Da
1936	Initial	195	1538	65	102	77.25	-	228.00	305.25	1.57	7.9	.
1937	Re-Erad.	250	146	-	8½	42.00	29.54	2.25	73.79	.295	0.6	.
	Initial	215	0	3	19	29.00	-	55.30	84.30	.392	0	.
1938	Re-Erad.	5538	299	0	25	62.40	-	48.15	110.55	.020	0.05	.
	Total	5753	299	3	44	91.40	-	103.45	194.85	.034	0.05	.
	Initial	410	1,538	68	121	106.25	-	283.30	389.55	.950	3.8	.
Totals	Re-Erad.	5788	445	-	33½	104.40	29.54	50.40	184.34	.032	0.08	.
	Total	6198	1,983	68	154½	210.65	29.54	533.70	573.89	.093	0.3	.

By States

N.Y.	Re-Erad.	5538	299	0	25	62.40	-	48.15	110.55	.020	0.05	.
	Initial	195	1,538	65	102	77.25	-	228.00	305.25	1.57	7.9	.
N.J.	Re-Erad.	250	146	-	8½	42.00	29.54	2.25	73.79	.295	0.6	.
	Total	445	1,684	65	110½	119.25	29.54	230.25	379.04	.852	3.8	.
Penna.	Initial	215	0	3	19	29.00	-	55.30	84.30	.392	0	.
	Initial	410	1,538	68	121	106.25	-	283.30	389.55	.950	3.8	.
Totals	Re-Erad.	5788	445	-	33½	104.40	29.54	50.40	184.34	.032	0.08	.
	Total	6198	1,983	68	154½	210.65	29.54	533.70	573.89	.093	0.3	.

Basis of costs: Same as Table 73.

Table 77 - Total Expenditures, By Cooperating Agencies, Under
S.C.S. Program in Northeastern States 1936-1938, Inclusive

State	Year	State Funds	B.E.&P.Q.	W.P.A.	S.C.S.	Totals
N.Y.	1938	2,105.53	-	269.78	3,987.88	6,363.19
	1936-1938	3,255.77	-	515.54	5,949.50	9,720.81
N.J.	1938	-	-	-	-	-
	1936-1938	119.25	29.54	-	230.25	379.04
Penna.	1938	29.00	-	-	2,294.23	2,323.23
	1936-1938	178.60	-	-	7,548.51	7,727.11
Totals	1938	2,134.53	-	269.78	6,282.11	8,686.42
	1936-1938	3,553.62	29.54	515.54	13,728.26	17,826.96

Table 78 - Total Cooperative Expenditures, By Projects, Under
S.C.S. Program in Northeastern States, 1936-1938, Inclusive.

State	Year	Ribes Eradication	Eradication Assistants and Checkers	Nursery Sanitation	Totals
N.Y.	1938	5,180.53	1,072.11	110.55	6,363.19
	1936-1938	7,990.95	1,619.31	110.55	9,720.81
N.J.	1938	-	-	-	-
	1936-1938	-	-	379.04	379.04
Penna.	1938	2,004.93	234.00	84.30	2,323.23
	1936-1938	6,170.21	1,463.60	84.30	7,727.11
Totals	1938	7,185.46	1,306.11	194.85	8,686.42
	1936-1938	14,170.16	3,082.91	573.89	17,826.96

HURRICANE DAMAGE TO WHITE PINE IN NEW ENGLAND

The hurricane of September 21, 1938 felled an estimated total of about four billion board feet of merchantable timber in New England. Over half of this amount consisted of merchantable white pine. Generally speaking, little damage was done to white pine growth under 30 feet in height. The area most seriously affected comprised the section east of the Connecticut River extending from Long Island Sound to Canada. Most of the damage in Vermont occurred in those townships immediately adjacent to the Connecticut River. In Maine most of the damage was restricted to Oxford and Cumberland Counties. New Hampshire suffered the greatest loss, the total amount of felled timber being estimated at 1,600,000,000 board feet, of which 1,200,000,000 was white pine.

In spite of the tremendous losses, the volume of the felled white pine represents only 7.5 percent of the total volume of all merchantable pine in the affected states, as determined by the cartographical survey of 1925. Even on the assumption that the volume estimates of 1925 are 50 percent too high, which seems very unlikely, the amount of pine timber felled by the hurricane would represent only 15 percent of the total volume of this species. From a blister rust control viewpoint, we are primarily interested in young white pine growth under 30 ft. in height, which obviously has little merchantable value at the present time. As indicated above, this young growth was not injured to any appreciable extent by the hurricane. Table 79 shows the estimated volume of merchantable timber felled in each of the New England States.

Table 79 - Total Estimated Volume Of Merchantable White Pine In New England And Estimated Amount Blown Down By Hurricane Of September 1938.

State	Volume of Merchantable Pine in M Bd. Ft. *				Amount of White Pine Timber Blown Down in	%
	Pure Pine	Mixed Pine		Total	M Bd. Ft.	Total
	6" & Over	30-79%	21-29%			
Maine	4,876,640	6,359,320	993,032	12,228,992	56,000	0.45
N.H.	4,216,416	2,226,928	1,185,756	7,629,100	1,200,000	15.7
Vt.	478,768	1,281,176	313,668	2,073,612	66,000	3.2
Mass.	2,593,808	2,186,128	255,060	5,034,996	600,000	11.9
R.I.	213,488			213,488	40,000	18.7
Conn.	523,152	532,408	231,176	1,286,736	175,000	13.6
Totals	12,902,272	12,585,960	2,973,692	28,466,924	2,136,000	7.5

* Based on cartographical survey of 1925. Per acre volume in board feet: Pure pine over 6" DBH, 16,000; mixed pine 30-79%, 8,000; and mixed white pine 21-29%, 4,000.

Use Of Autogiro In Mapping Location And Extent Of Forest Areas
Damaged By Hurricane in New Hampshire

Immediately following the hurricane, it was apparent that there was urgent need for a rapid survey to determine the location and extent of the stands damaged by the hurricane. Therefore, our regional office arranged, in cooperation with the State and Forest Service officials in New Hampshire, to conduct an experiment to determine the practicability of using an autogiro in mapping areas containing blown-down timber. This test was made possible by the loan of an autogiro and pilot through the courtesy of Mr. E. G. Brewer, in charge of activities at the Bloomfield, New Jersey, office of the Bureau of Entomology and Plant Quarantine.

During the limited time the plane was available, a complete examination was made of the townships of Swanzey and Chesterfield and about one-half of the township of Richmond. Some mapping was also performed in four adjoining townships chiefly from observations made while the plane was maneuvering or going to and from the airport at Keene, New Hampshire. Each township was traversed by a series of parallel flight strips from one-eighth to a half mile in width. The observer plotted the areas of blown-down timber on U.S.G.S. maps indicating the approximate location, size and shape of each unit comprising two or more acres, where 10 percent or more of the merchantable size trees (6" DBH and over) had been felled. A total of 18,184 acres of wind thrown timber was recorded on 74,140 acres surveyed during 6½ hours of actual flying time.

In order to compare the amount of time required on aerial mapping with that of a ground survey, a total of six hours was spent on a ground check made in a representative block comprising 224 acres and containing 140 acres of felled timber. An average of 37 acres per hour was mapped on the ground survey, as compared with an average of 11,406 acres on the aerial work. In other words, the aerial survey was 308 times faster than the ground work. In each instance the survey work was performed by the same man who was experienced in both types of work.

As a further check on the work performed by the autogiro, a careful examination was made of a few areas on the ground to compare the location, size and shape of the areas as mapped from the air. This check showed that the aerial work resulted in accurate location of the areas, while the size as determined from the air was at least 70 percent correct.

As a result of the experiment, the Governor of New Hampshire made available \$2,000 for continuing the aerial survey and \$484 was contributed by the State Forestry and Recreation Department. Unfortunately the planes were not available until the 9th of November; and during the remainder of the year, conditions were frequently unfavorable for such type of mapping work. In spite of the adverse circumstances, a total of 4,091.1 square miles, comprising 2,618,313 acres, were surveyed by the observers in two autogiros assigned to the project. An average of 16,846.8 acres were examined per hour, based on actual flying time. Although a total of 770 man hours were used on the project, actually only 20 percent of this time was consumed in flying due to weather conditions and necessary repairs to the machines.

The total cost of the project amounted to \$2,473.42. Based on the total area surveyed, the average cost was 60.4 cents per square mile. The planimetering of the areas containing blown-down timber has not as yet been completed, consequently no data are available at this time as to the total acreage of felled timber. Copies of the maps showing the affected areas have been made available to the U. S. Forest Service and the State Forestry Department. Our state and district leaders have access to these maps and copies are being supplied, where needed, for use of the state and local forestry officials and blister rust control men.

The information obtained by the aerial mapping and the ground surveys made by our WPA labor assigned to this project in New Hampshire and Vermont from October to December is of great value to our Division in planning future blister rust control work. Ribes eradication will not be conducted in the affected areas during 1939. The disturbance of the duff will permit the stored Ribes seeds to germinate; consequently, we may expect regrowth of such bushes to become a control factor two or three years later. Many areas that we have classed as on a control maintenance basis may revert to conditions similar to those existing at the time of the original work. The pines in New England produced a very heavy seed crop during 1938, therefore reproduction should occur in many of the damaged areas. As previously mentioned, from a blister rust control viewpoint, we are concerned primarily with pine growth under 30 feet in height and such trees were not damaged materially by the storm.

BLISTER RUST CONTROL ACTIVITIES AND ACCOMPLISHMENTS

UNDER ALL PROGRAMS IN THE NORTHEASTERN STATES

DURING 1938

Table 80.- Personnel Employed on Blister Rust Control Work
In Northeastern States During 1938.

State	Maine	N.H.	Vt.	Mass.	R.I.	Conn.	N.Y.	N.J.	Penna.	Totals	
State Leaders	1	1	1	1	1	1	1	1	1	9	
District Leaders	4	5	3	4	-	1	8	-	(1) 5	30	
Supervisors, Technical Foremen, and Checkers	(2) 4	-	-	-	-	-	(2) 15	-	2	21	
	Regular	14	1	6	4	2	7	43	-	31	107
	C.C.C.	-	-	-	-	-	-	-	-	-	-
	Federal W.P.A.	-	-	-	-	-	-	-	-	-	-
	State & Local WPA	-	-	-	-	-	4	-	-	1	5
	S.C.S.	-	-	-	-	-	-	2	-	1	3
Total	18	1	6	4	2	11	60	-	34	136	
Crew Men (includes crew fore- men, scouts, and laborers)	Regular	143	335	10	9	-	-	107	-	44	648
	C.C.C.	224	10	109	114	48	135	562	-	624	1,826
	Federal W.P.A.	229	234	195	205	19	49	370	-	208	1,509
	W.P.A. Others	31	-	-	148	-	1	26	-	1	207
	State & Local WPA	-	-	-	-	-	54	-	-	50	104
	S.C.S.	-	-	-	-	-	-	28	-	40	68
	Total	627	579	314	476	67	239	1093	-	967	4,362
Total	650	586	324	485	70	252	1162	1	1,007	4,537	

(1) Includes two state agents who assisted state leader on supervisory work.

(2) Personnel listed for Regular Cooperative Program also assisted in supervision of W.P.A. activities.

The number of men actually engaged on blister rust control work was greater than the number indicated in the above table since the figures for the C.C.C. enlisted personnel are based on the average number of men employed during the period involved. During 1938, a total of 210 individual owners paid for control work on their properties or provided necessary labor. Several hundred other persons permitted the destruction of their cultivated bushes without compensation and hundreds of others gave general support to the control program.

Table 81. - Summary of Ribes Eradication Work Conducted Under All Programs in Northeastern States During 1938

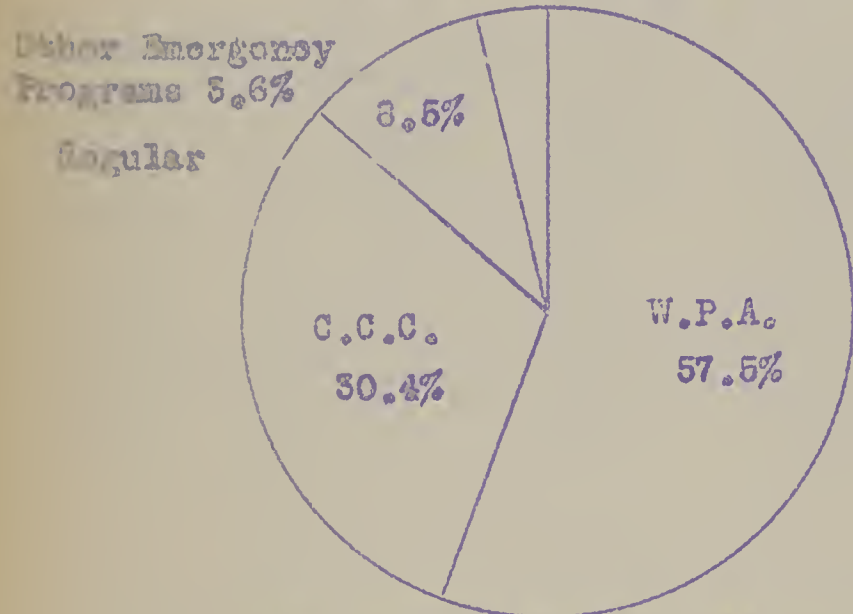
(Excludes nursery sanitation and cultivated black currant elimination)

Program		Regular Cooperative	C.C.C.	Federal W.P.A.	State and Local W.P.A.	S.C.S.	Total
Total	Initial	28,224	100,597	190,318	6,588	5178	330,705
Acreage	Re-Erad.	58,280	142,075	192,494	17,760	255	410,834
Worked	Total	86,503	242,472	382,812	24,348	5433	741,539
Acreage	Initial	11,200	26,397	61,602	536	1353	101,088
Pine	Re-Erad.	27,198	36,990	70,841	2,652	85	136,764
Protected	Total	38,396	62,387	132,443	3,188	1438	237,052
Wild Ribes pulled		1,601,487	4,245,056	6,552,952	1,148,501	251,814	13,799,780
Cult. Ribes pulled		2,442	4,531	12,853	2,234	16	22,081
Total man days		13,097	111,953	68,600	6,274	4,019	203,943
Cost	Individuals	2,872.32	-	617.66	239.85	-	5,729.78
	Towns	16,625.34	-	6,120.16	1,530.00	-	24,275.50
	Counties	8,988.40	-	513.35	-	-	9,501.75
	State	18,542.49	5,313.64	14,582.80	-	1240.80	37,679.59
	C.C.C.	-	185,570.52	-	-	-	185,570.52
	Federal W.P.A.	19.03	-	243,635.78	-	-	243,652.81
	State & Local WPA	-	-	-	28,635.71	-	28,635.71
	B.E.&P.Q.	-	-	8.53	-	-	8.53
	S.C.S.	-	-	-	-	5944.66	5,944.66
	Total	47,047.58	188,684.16	265,475.98	30,405.56	7185.46	538,998.74
Per Acre	Cost	.544	.779	.693	1.25	1.52	2.27
	Ribes	18.6	17.6	17.1	47.2	46.8	16.8
	Man Days	.16	.46	.18	.26	.74	.38

WILDS ERADICATION PROGRAMS UNDER WPA PROGRAM IN THE
NORTHEASTERN STATES DURING CALENDAR YEAR 1938

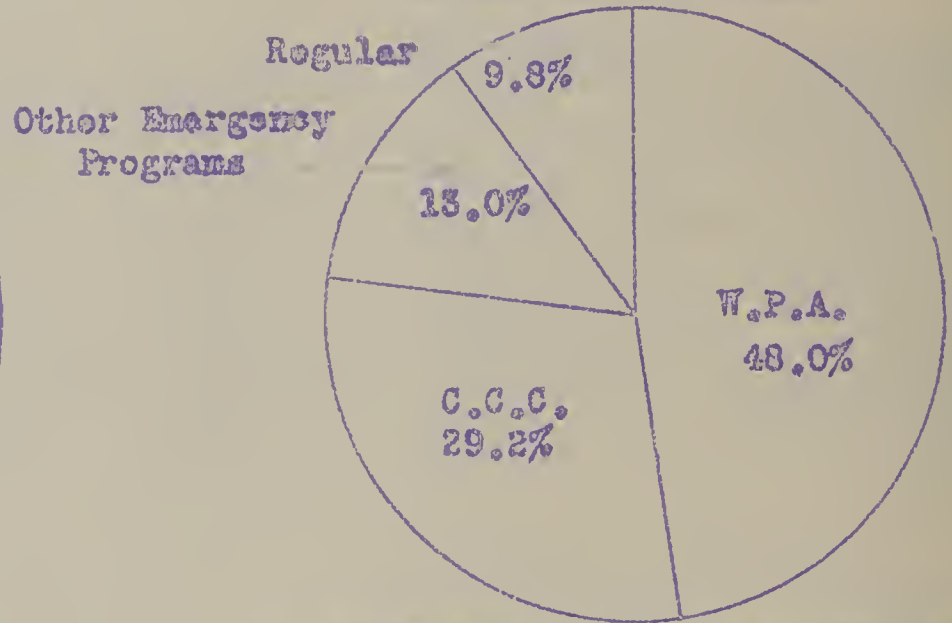
(Excludes Nursery Sanitation and Cultivated Black Currant Elimination)

Percentage of Total Acreage
Cleared of Ribes
Initial Eradication



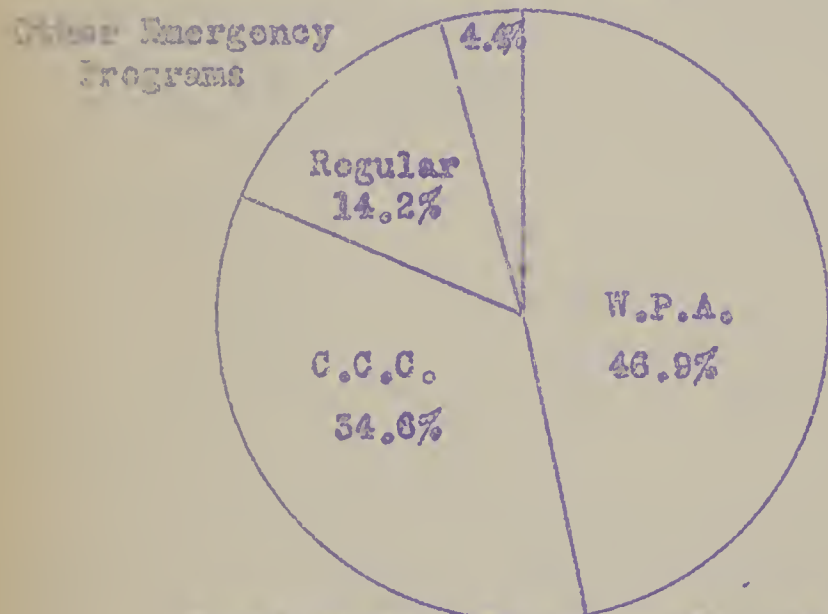
Total Acreage Worked - 330,705

Percentage of Total
Wild Ribes Destroyed
Initial Eradication



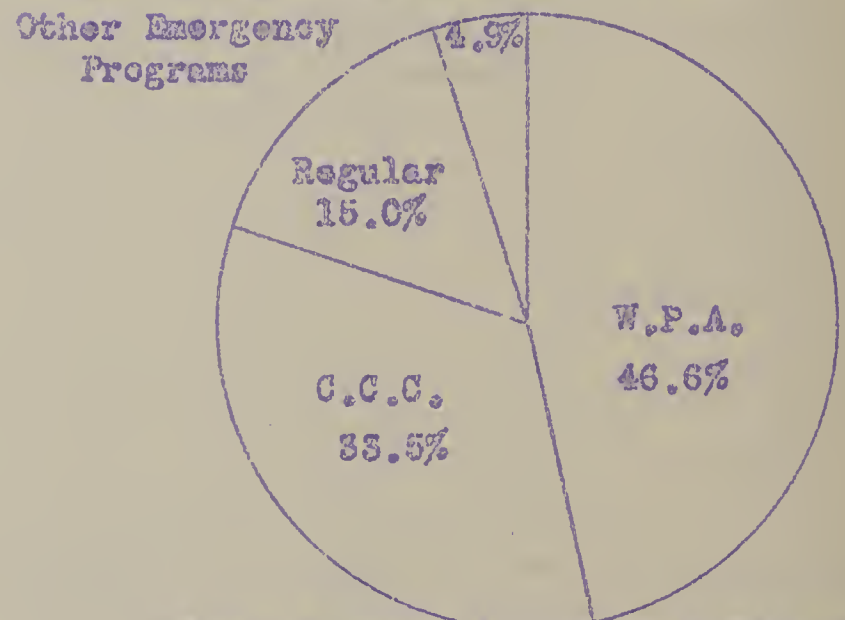
Total Number of Ribes - 8,966,770

Reeradication



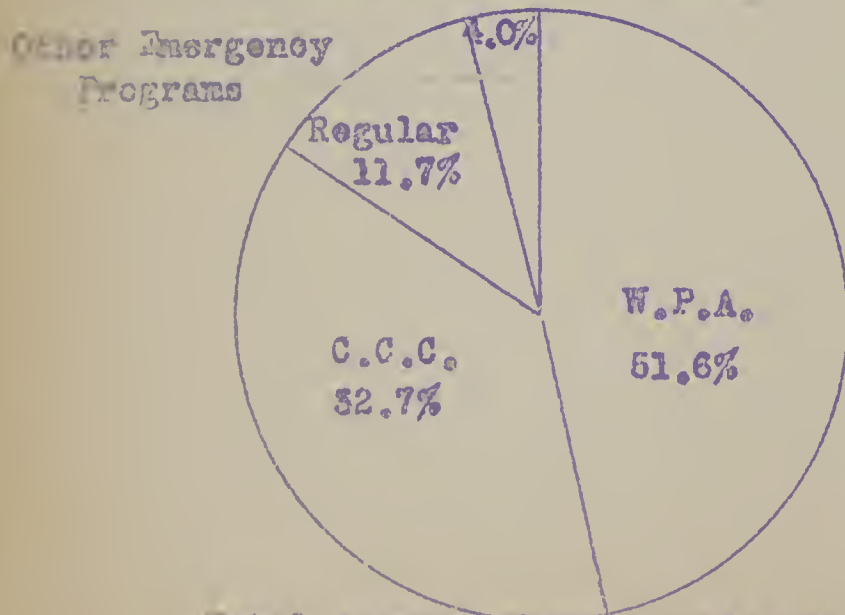
Total Acreage Worked - 410,864

Reeradication



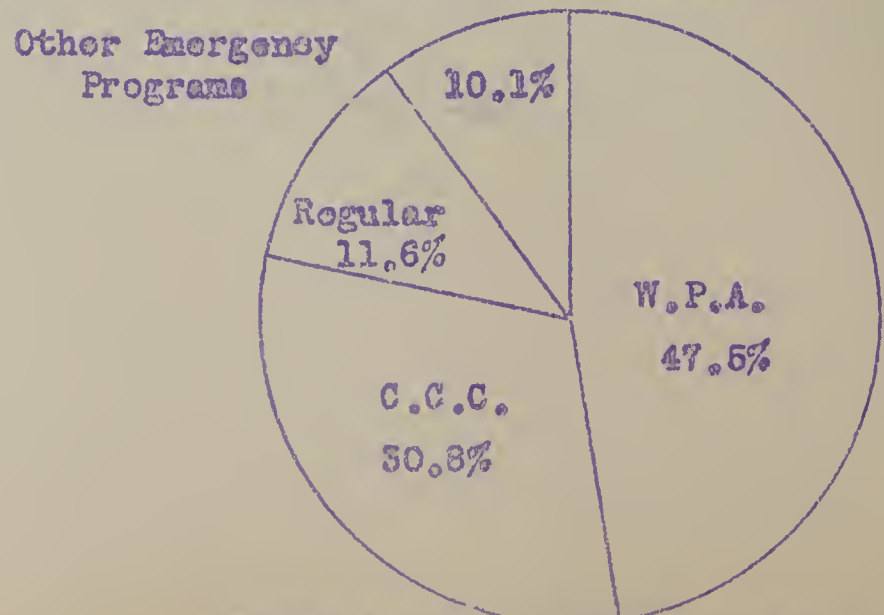
Total Number of Ribes - 4,844,010

Initial & Reeradication



Total Acreage Worked - 741,569

Initial & Reeradication

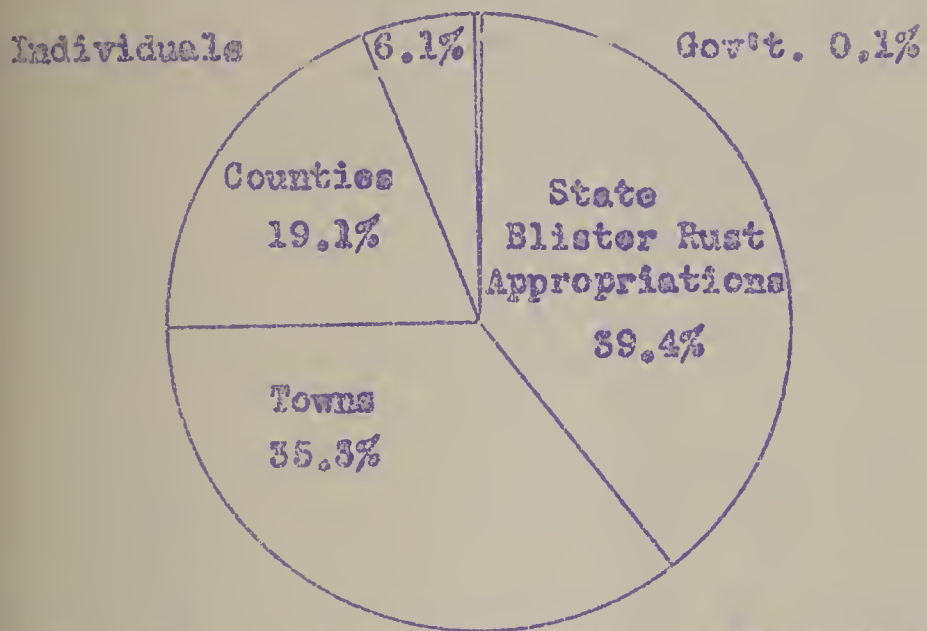


Total Number of Ribes - 15,799,780

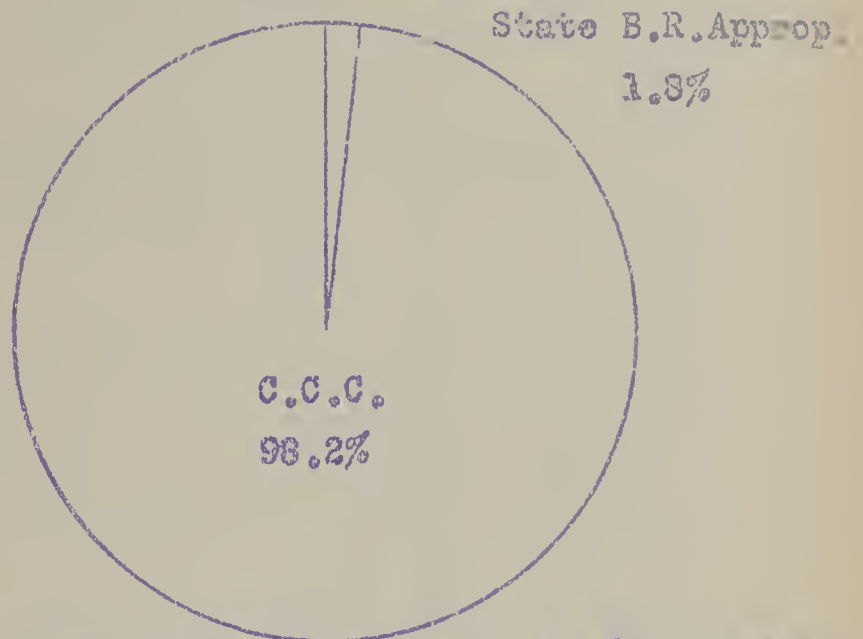
**SOURCE OF TOTAL FUNDS SPENT ON PROJECT "RIBES ERADICATION"
UNDER EACH PROGRAM IN NORTHEASTERN STATES CALENDAR YEAR 1938**

(Excludes Nursery Sanitation and Cultivated Black Currant Elimination)

Regular Cooperative Program



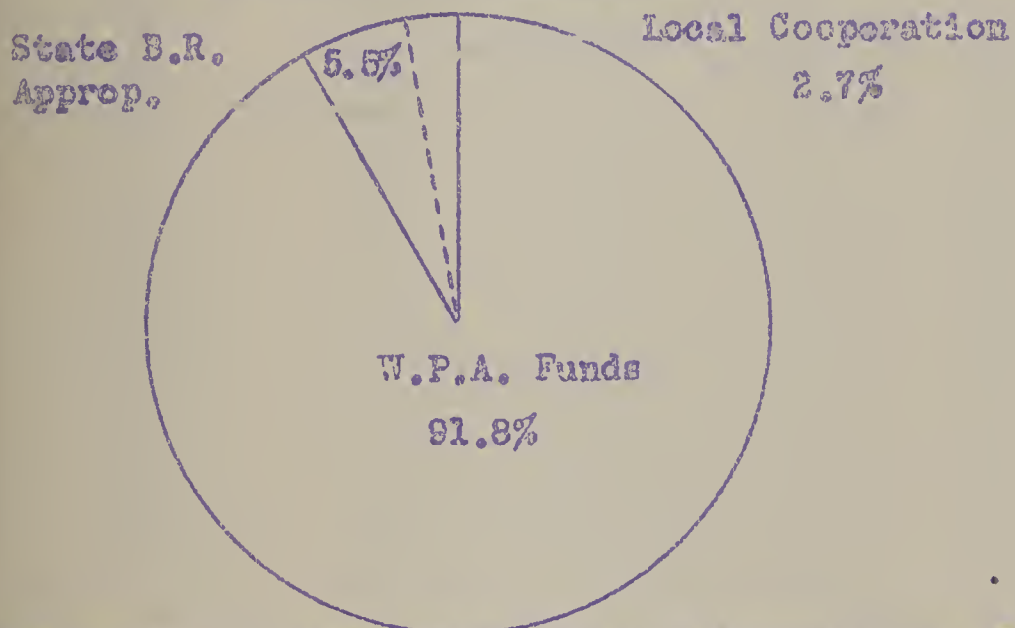
C.C.C. Program



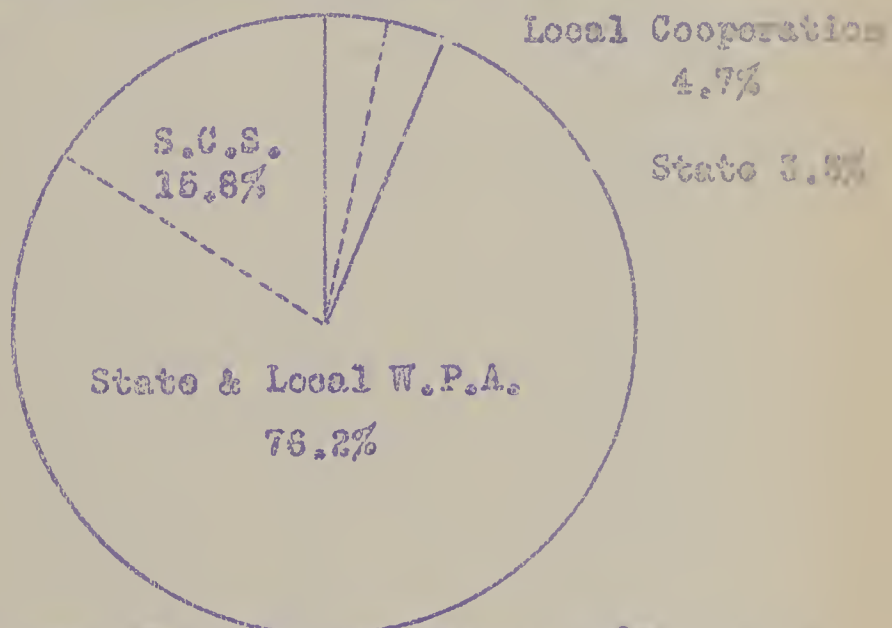
Total Cost of Ribes Eradication - \$47,047.58

Total Cost of Ribes Eradication - \$188,884.16

Federal W.P.A. Program



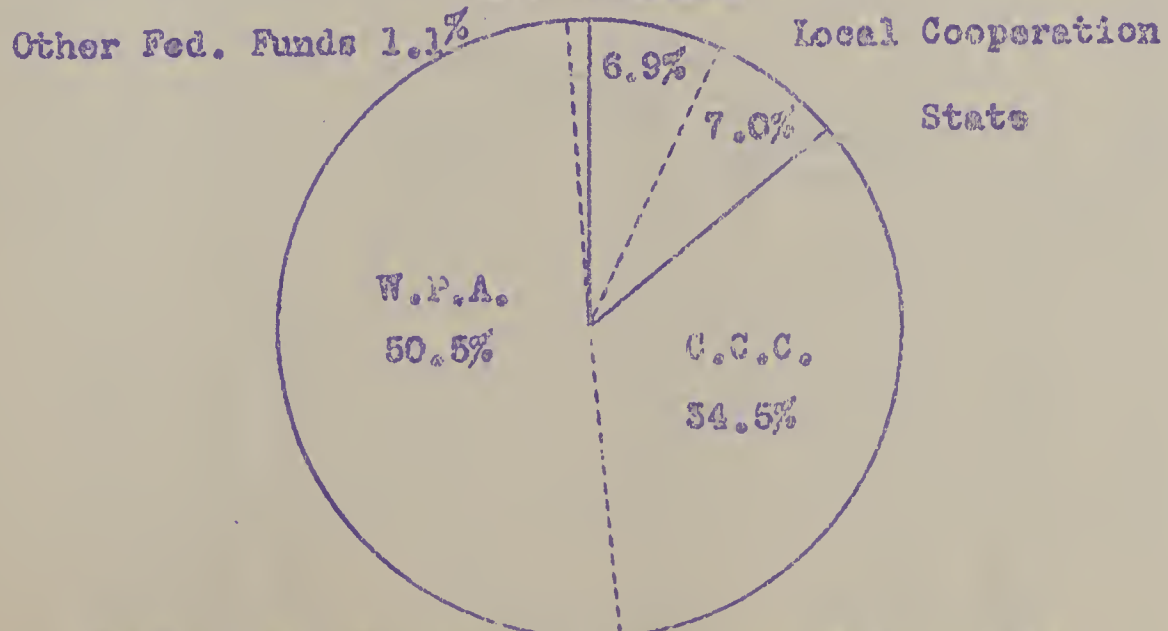
Other Federal Emergency Programs



Total Cost of Ribes Eradication - \$285,475.98

Total Cost of Ribes Eradication - \$37,591.02

All Programs



Total Cost of Ribes Eradication - \$538,998.74

Table 82 - Classification of Blister Rust Control Funds Used on Project "Ribes Eradication"
Under All Programs in Northeastern States During 1938.

(Excludes nursery sanitation and cultivated black currant elimination)

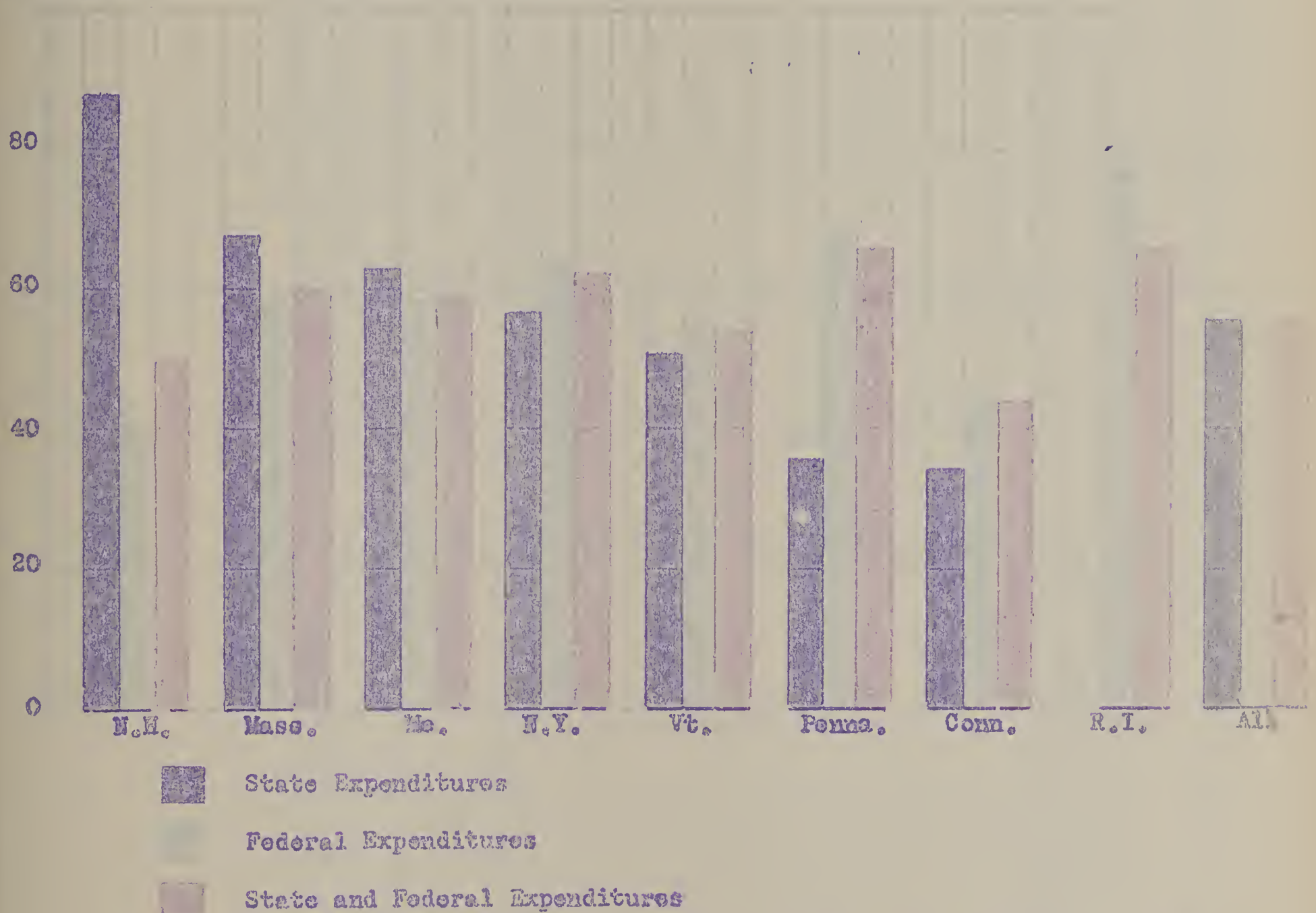
State	State Funds			Federal Funds							Grand Total
	Indiv.	Towns And Counties	State	Total	C.C.C.	W.P.A.		P.Q.	S.C.S.	Total	
						Federal Projects	State & Local Projects				
Maine	184.00	6,593.39	1,773.79	8,551.18	36,901.43	34,731.58	-	-	-	71,652.99	80,184.17
N.H.	194.80	12,348.57	3,041.12	15,584.49	328.30	32,410.60	-	-	-	32,738.90	48,523.39
Vt.	243.80	1,453.09	32.00	1,933.89	10,722.24	24,912.45	-	-	-	35,634.69	37,568.58
Mass.	1,259.86	2,038.80	2,029.81	5,308.57	9,242.92	36,491.68	-	8.53	-	45,743.13	51,051.70
R.I.	-	-	-	-	5,493.20	3,261.97	-	-	-	8,755.17	8,755.17
Conn.	247.85	2,030.00	-	2,277.85	17,388.10	6,025.01	19,235.71	-	-	42,648.82	44,926.67
N.Y.	1,342.07	9,303.40	27,077.38	37,728.35	46,993.98	76,362.56	-	-	3,939.73	127,296.27	165,024.62
Penna.	77.25	-	3,724.93	3,802.18	53,500.35	29,456.98	9,400.00	-	2,004.93	99,362.26	103,164.44
Totals	3,729.73	33,777.25	37,679.53	75,186.51	185,570.52	243,652.81	28,635.71	8.53	5,944.66	463,812.23	538,998.74
% of Total	0.7	6.2	7.0	13.9	34.6	45.2	5.3	-	1.1	86.1	100.0

(1) Includes \$193.35 county funds.

(2) County funds.

**PERCENTAGE OF TOTAL EXPENDITURES IN THE VARIOUS NORTHEASTERN STATES
FOR RIBES ERADICATION WORK DURING 1938.**

100 Percent



Note: Includes regular Ribes eradication, special black current elimination and nursery sanitation.

Table 83 - Summary of Nursery Sanitation Work Conducted Under All Programs in Northeastern States During 1938.

State	Type of Erad.	No. Nurseries Worked	Acreage Worked	Ribes Pulled		Total Man Days	Cost					Per Acre			
				Wild	Cult.		Indiv.	State	C.C.C.	W.P.A.	S.C.S.	Total	Cost	Ribes	Per Acre
Maine	Re-Erad.	1	222	1	-	23	-	-	36.82	-	-	36.82	.166	.004	.10
N.H.	Re-Erad.	1	499	1	-	4	-	14.09	-	-	-	14.00	.028	.002	.009
Mass.	Re-Erad.	4	2,140	6,163	3	91	-	205.93	-	180.99	-	584.92	.180	2.9	.01
R.I.	Re-Erad.	5	2,273	4	-	40	-	-	-	170.56	-	170.56	.075	.001	.02
Conn.	Re-Erad.	11	3,609	134	-	55	-	357.20	-	-	-	357.20	.099	.04	.02
N.Y.	Re-Erad.	5	9,228	2,008	-	164	-	192.40	-	421.09	48.15	661.64	.072	0.2	.02
Totals	Initial	1	215	-	3	19	-	29.00	-	-	55.30	84.30	.392	0	.03
	Re-Erad.	9	3,784	1,780	9	733	55.50	541.60	917.83	120.93	-	1635.94	.432	0.5	.20
	Total	10	3,999	1,780	12	757	55.50	570.60	917.88	120.96	55.30	1720.24	.430	0.4	.19
Totals	Initial	1	215	-	3	19	-	29.00	-	-	55.30	84.30	.392	0	.03
	Re-Erad.	56	21,755	10,091	12	1,115	55.50	1309.13	954.70	893.60	48.15	3261.08	.160	0.6	.05
	Total	37	21,970	10,091	15	1,134	55.50	1338.13	954.70	893.60	103.45	3345.38	.162	0.45	.03
Percentage of total cost by cooperating agencies							1.7	40.0	28.5	26.7	3.1	100.0	-	-	-

Table 84 - Special Ribes Nigrum Elimination Work Conducted
Under All Programs in Northeastern States During 1938.

(Work restricted to W.P.A. Program in Massachusetts)

No. towns worked.....	16
No. towns completed.....	11
No. properties inspected.....	22,158
No. patches located.....	128
No. Ribes pulled (Nigrum.....	76
(Other Cult,	1
Total man days.....	115
Cost (Individual.....	\$3.20
(W.P.A.	\$508.35
(Total.....	\$511.55

Basis of costs: Includes wages of laborers while engaged in locating and destroying Ribes nigrum and other cultivated bushes as indicated.

This W.P.A. work in Massachusetts was a re-check of areas originally examined several years ago.

Table 85 - Pine and Control Area Mapping Conducted Under All Programs in Northeastern States During 1938.

State	No. Towns	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Total Man Days	Towns	Counties	State	Cost				B.E. & P.Q.	Total
									C.C.C.	W.P.A.				
Maine	73	282,527	820,007	-	6,778	-	-	90.80	-	24,968.57	-	-	-	25,059.57
N.H.	51	178,434	56,042	-	6,176	323.98	351.37	-	-	24,073.55	-	-	-	24,748.70
Vt.	54	213,266	828,794	67	3,275	488.89	-	-	860.12	9,586.10	-	-	-	10,935.11
Mass.	38	179,846	130,614	132	3,672	312.78	-	44.53	-	14,839.93	36.24	-	-	15,233.57
Conn.	65	110,306	-	1,219	5,257	1087.50	-	30.75	-	26,257.00	-	-	-	27,375.31
N.Y.	80	300,644	73,214	-	5,425	-	-	5377.13	-	19,059.44	-	-	-	22,436.57
Penna.	137	66,256	-	590	2,718	-	-	-	3599.20	6,256.19	-	-	-	9,855.38
Totals	498	1,357,079	1,908,671	2,058	33,301	2213.15	551.37	3543.24	4459.32	125,020.64	36.24	-	-	135,623.58
Percentage of total cost by cooperating agencies						1.6	0.3	2.6	3.3	92.2	-	-	-	100.0

* Includes \$22,587.90 W.P.A. funds expended on special state project.

Several hundred thousand acres were also examined but not mapped in Pennsylvania, but no definite record was kept of the acreage eliminated in that state.

Table 86 - Blister Rust Canker Elimination Work Under All Programs
in Northeastern States During 1938.

State	Est. No. Pines Examined	No. Fatally Infected Pines Cut Down	No. Pines From Which Cankers Removed	No. Cankers Removed		Total Man Days	Cost					
				Branch	Stem		Indiv.	Totals	State	W.P.A.	C.C.C.	Total
Maine	7,486	1,289	1,506	3,992	391	415	843.52	-	31.65	-	354.96	1,230.13
Vt.	27,364	2,428	4,302	6,003	171	488	220.48	25.00	-	1,252.26	-	1,497.74
Mass.	5,348	1,266	213	218	-	222	-	794.00	-	102.78	-	896.78
N.Y.	413,395	20,978	53,225	75,189	690	2126	-	-	576.90	7,945.93	-	8,522.83
Penna.	133,042	1,866	21,425	44,801	772	1180	-	-	-	4,957.14	-	4,957.14
Total	586,635	27,820	80,671	130,203	2024	4429	1064.00	819.00	606.55	14,263.11	354.96	17,104.62
Percentage of total cost by cooperating agencies							6.2	4.8	3.5	85.4	2.1	100.0

Table 87 - State Compensation Paid For Cultivated Ribes Destroyed Under All Programs
in Northeastern States During 1938.

State	Total No. Cultivated Ribes Destroyed	No. Bushes Paid For	No. Bushes Paid For	No. Persons Paid Compensation	Amount Paid in Reimbursement	Ave. Amount Paid Per Bush
Maine	3,018	-	-	-	-	-
N.H.	561	-	-	-	-	-
Vt.	1,410	-	-	-	-	-
Mass.	4,151	44	1.1	2	22.00	\$0.50
R.I.	1,374	-	-	-	-	-
Conn.	2,811	-	-	-	-	-
N.Y.	5,308	79	1.5	2	17.50	0.22
N.J.	-	-	-	-	-	-
Penna.	3,540	-	-	-	-	-
Totals	22,173	123	0.6	4	\$9.50	\$0.32

Table 88. - Total State Expenditures, By Cooperating Agencies, For
Blister Rust Control Work in Northeastern States During Calendar Year 1938

State	State BR Appropriation	Other State Appropriation Funds	Town Funds	Individual Funds or Labor	County Funds	Total
Maine	5,949.88	-	6,593.39	1,027.52	-	13,570.79
N.H.	4,378.18	-	12,527.12	194.80	557.64	17,667.72
Vt.	1,166.55	-	1,971.98	664.28	-	3,802.81
Mass.	2,998.59	598.73	3,280.28	1,243.16	-	8,120.76
R.I.	1,982.17	-	-	-	-	1,982.17
Conn.	3,970.20	-	3,455.00	247.85	-	7,673.05
N.Y.	46,484.63	9,704.27	-	1,342.07	9,308.40	66,839.37
N.J.	-	-	-	-	-	-
Penna.	12,233.15	-	-	132.75	-	12,365.90
Totals	79,163.33	10,303.00	27,827.77	4,862.43	9,876.04	132,022.57
% of Total	59.9	7.8	21.1	3.7	7.5	100.0

Table 89. - Total State Expenditures During The Calendar Year 1938 For The Various Blister Rust Control Projects in The Respective Northeastern States.

State	Supervision and B.R.C. Agent Activities	Ribes Eradication	Extad. Assistants and Checkers	Black Current Elimination	Nursery Sanitation	Ribes Compensation	Blister Rust Canker Elimination	Field Data		Total
								Mapping	General	
Maine	2,065.14	8,551.18	1,988.50	-	-	-	875.17	90.80	-	13,570.72
N.H.	1,323.04	15,584.49	-	-	14.00	-	-	675.35	70.84	17,667.72
Vt.	1,134.55	1,933.89	-	-	-	-	245.48	488.89	-	3,802.81
Mass.	478.50	5,308.57	818.52	3.20	203.93	22.00	794.00	357.34	134.70	8,120.75
R.I.	1,982.17	-	-	-	-	-	-	-	-	1,982.17
Conn.	2,697.71	2,277.85	867.37	-	357.20	-	-	1,118.25	354.67	7,673.05
N.Y.	-	37,728.35	13,916.14	-	192.40	17.50	576.90	3,377.13	11,030.95	66,839.37
N.J.	-	-	-	-	-	-	-	-	-	-
Penna.	5,555.99	3,802.18	694.12	-	626.10	-	-	-	1,687.51	12,365.90
Totals	15,237.10	75,186.51	18,284.65	3.20	1393.63	39.50	2491.55	6,107.76	13,278.67	132,022.57
% Total	11.5	56.9	13.9	-	1.1	-	1.9	4.6	10.1	100.0

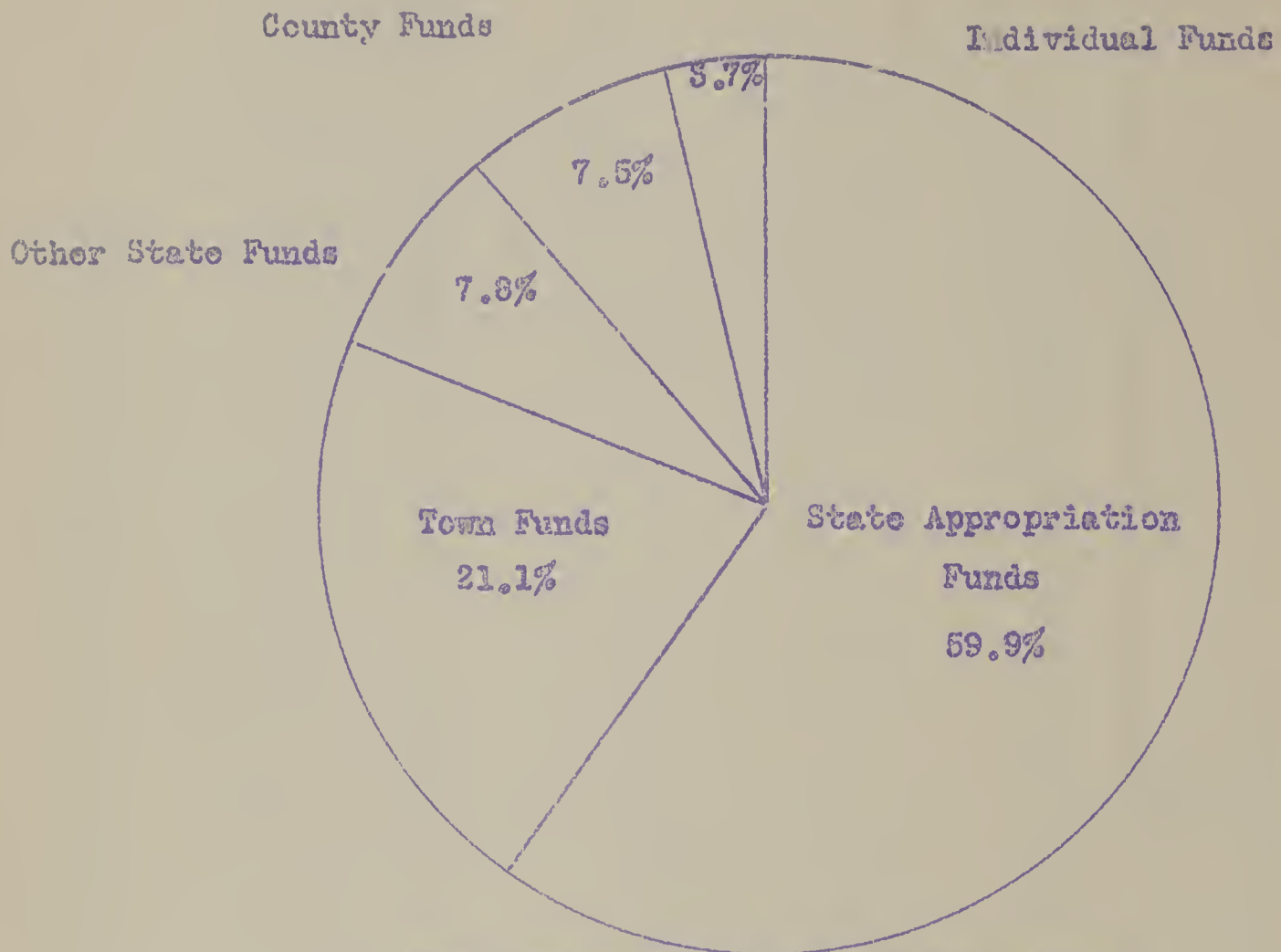
Table 90. - Total Federal Expenditures During The Calendar Year 1938 For The Various Blister Rust Control Projects in The Respective Northeastern States.

State	Supervision and B.R.C. Agent Activities	Ribes Eradication	Erad. Assistants and Checkers	Black Currant Elimination	Nursery Sanitation	Blister Rust Canker Elimination	Field Data		Total
							Mapping	General	
Maine	18,684.17	71,632.99	6,929.96	-	36.82	354.96	24,968.57	35.68	122,643.15
N.H.	18,118.55	32,738.90	58.25	-	-	-	24,073.35	4,166.96	79,155.01
Vt.	13,800.19	35,634.69	2,752.57	-	-	1,252.26	10,446.22	2,293.42	66,179.19
Mass.	16,169.03	45,743.13	669.40	508.35	180.99	102.78	14,876.17	475.46	78,725.31
R.I.	1,331.66	8,755.17	1,275.00	-	170.56	-	-	-	11,532.19
Conn.	5,864.16	42,648.82	13,437.97	-	-	-	26,257.06	7,854.34	96,062.30
N.Y.	27,129.70	127,296.27	6,215.04	-	469.24	7,945.93	19,059.44	10,762.00	198,877.62
N.J.	12.66	-	-	-	-	-	-	-	12.66
Penna.	15,687.14	99,362.26	7,728.65	-	1,094.14	4,957.14	9,835.39	8,435.48	147,100.21
Totals	116,797.26	463,812.23	39,066.85	508.35	1,951.75	14,613.07	129,516.20	34,023.34	800,289.05
% Total	14.6	58.0	4.9	0.1	0.2	1.8	16.2	4.2	100.0

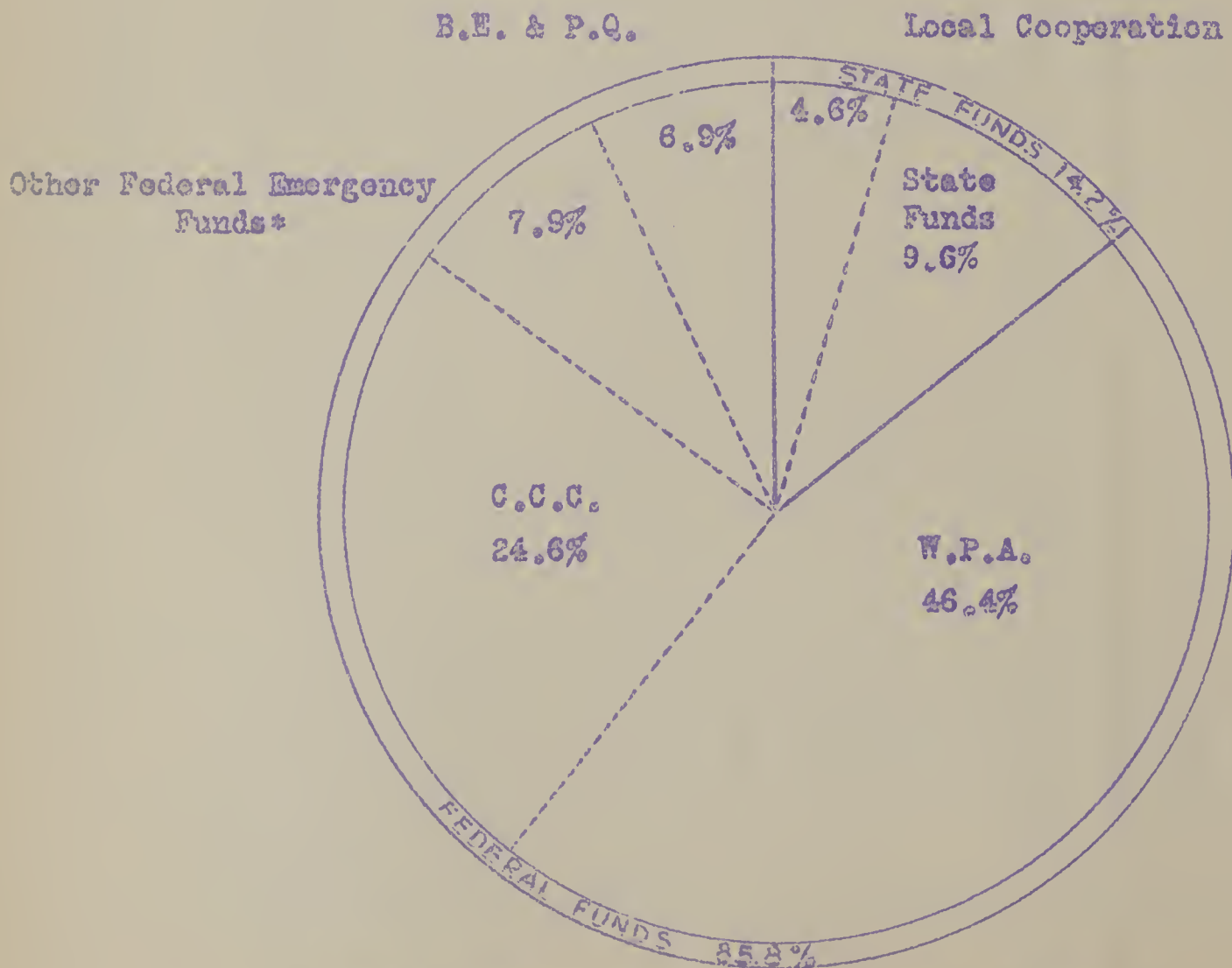
Table 91. - Total State and Federal Expenditures For Blister Rust Control
in Northeastern States During Calendar Year 1938.

State	Total State Expenditures	Federal Expenditures				S.C.S.	Total	Total State and Federal Expenditures
		B.E. & P.Q.	C.C.C.	Federal W.P.A.	State & Local W.P.A.			
Maine	13,570.79	11,970.43	44,223.17	66,449.55	-	-	122,643.15	136,213.94
N.H.	17,667.72	10,542.08	386.55	63,227.38	-	-	79,156.01	96,823.73
Vt.	3,802.81	6,884.50	14,334.93	44,959.92	-	-	66,179.35	69,982.16
Mass.	8,120.76	10,479.90	9,515.37	58,730.04	-	-	78,725.31	86,846.07
R.I.	1,982.17	353.92	6,768.20	4,410.27	-	-	11,532.39	13,514.56
Conn.	7,673.05	3,623.79	22,133.90	11,934.54	58,370.12	-	96,062.35	103,735.40
N.Y.	66,839.37	13,073.81	52,728.68	129,087.25	-	3987.88	198,877.62	265,716.99
N.J.	-	-	-	12.66	-	-	12.66	12.66
Penna.	12,365.90	7,583.58	78,947.57	48,874.83	9,400.00	2294.23	147,100.21	159,466.11
Totals	132,022.57	64,512.01	229,038.37	432,686.44	67,770.12	6282.11	800,289.05	932,311.62
% of Total	14.2	6.9	24.6	46.4	7.2	0.7	85.8	100.0

PERCENTAGE TOTAL BLISTER RUST CONTROL EXPENDITURES
IN NORTHEASTERN STATES DURING CALENDAR YEAR 1938
PAID BY VARIOUS COOPERATING AGENCIES.



Total State Expenditures - \$132,022.57



Total State and Federal Expenditures - \$32,511.62

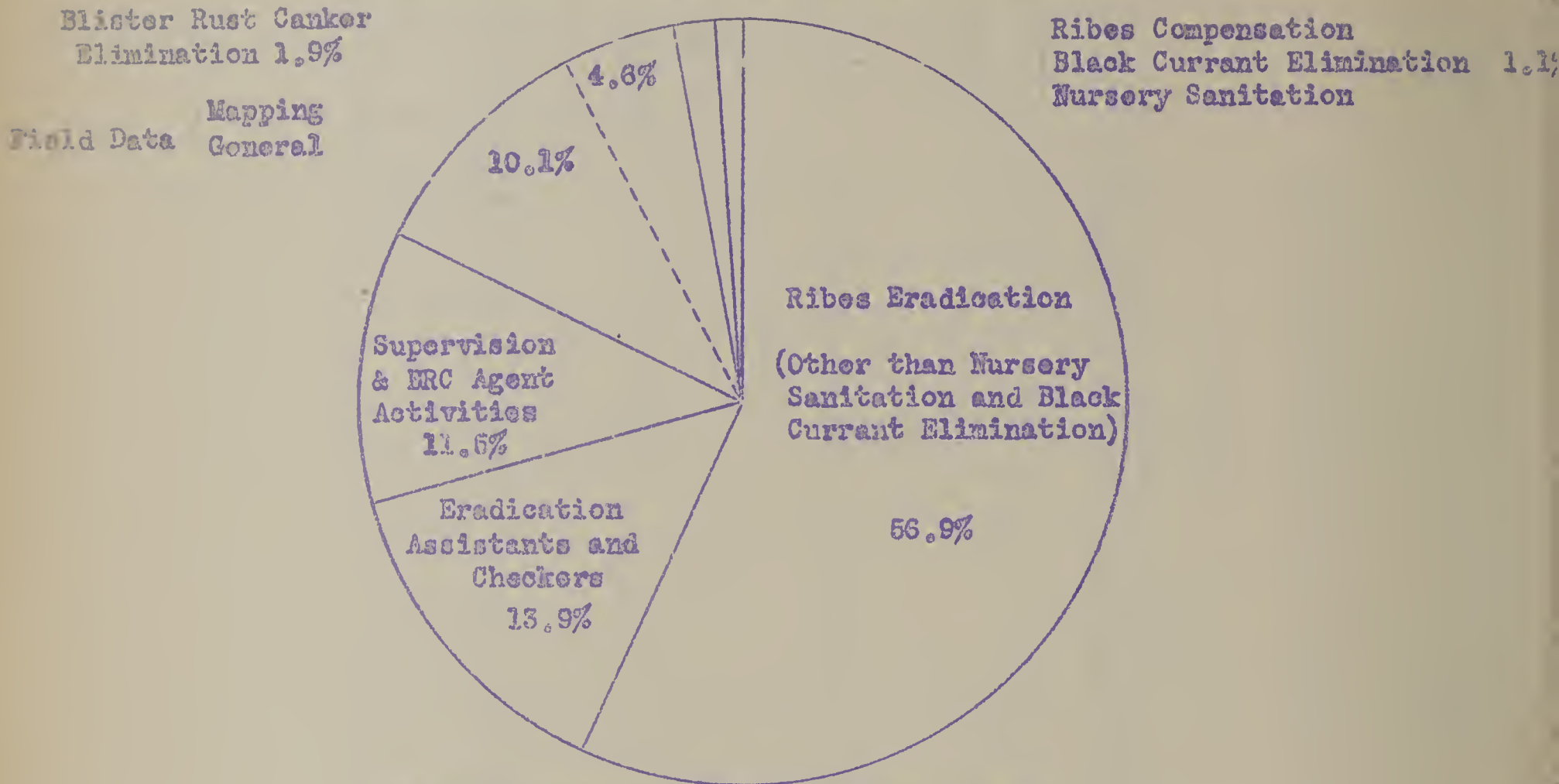
* Includes W.P.A. funds expended under State and Local W.P.A. Programs.

Table 92 - Total State and Federal Expenditures During Calendar Year 1938 For The Various Blister Rust Control Projects in The Northeastern States.

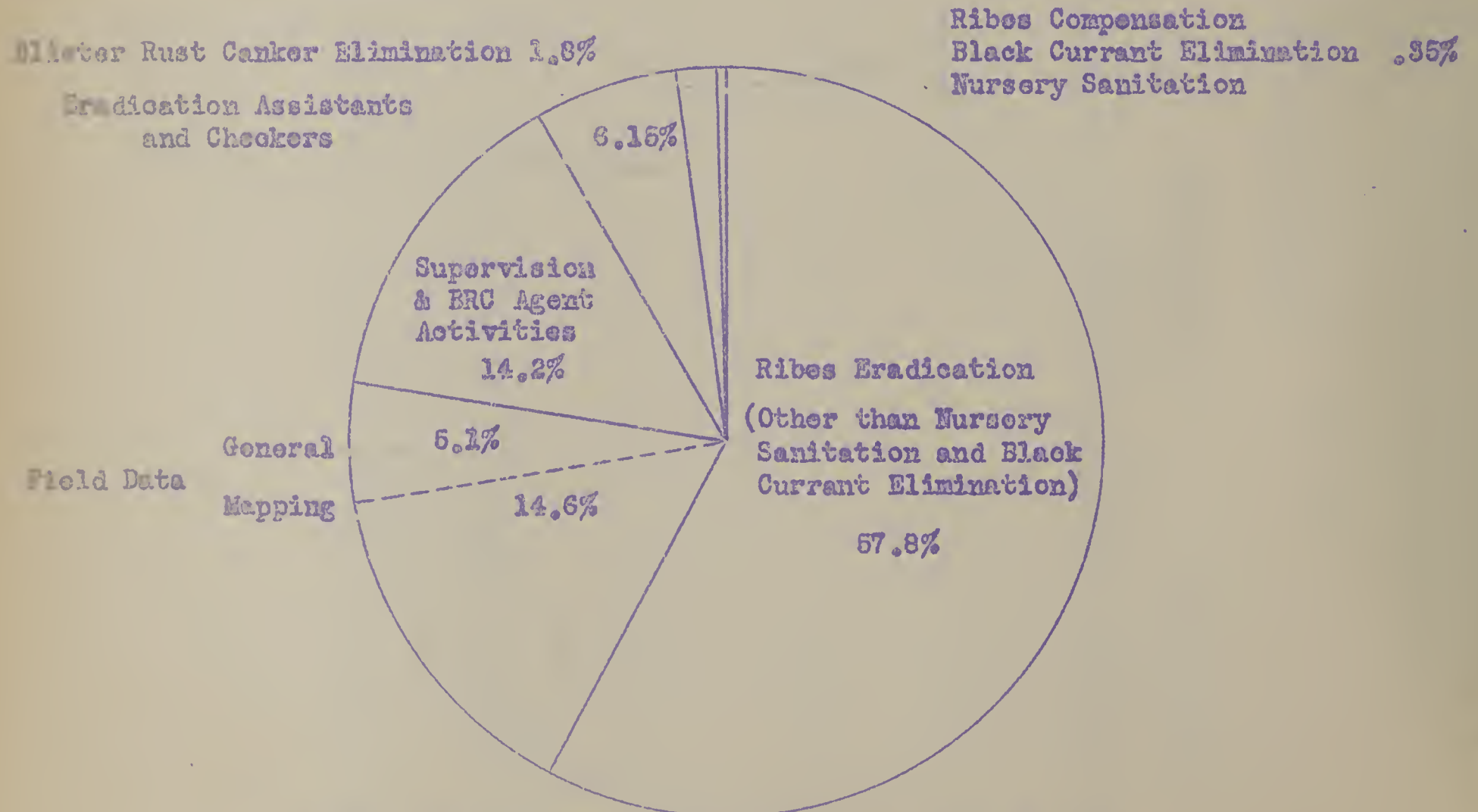
State	Supervision and B.R.C. Agent Activities	Ribes Eradication	Eradication Assistants and Checkers	Black Currant Elimination	Nursery Sanitation	Ribes Compensation	Blister Rust Canker Elimination	Field Data		Total
								Mapping	General	
Maine	20,749.31	80,184.17	8,918.46	-	36.82	-	1,230.13	25,059.37	35.68	136,213.94
N.H.	19,441.59	48,323.39	58.25	-	14.00	-	-	24,748.70	4,237.80	96,823.73
Vt.	14,934.74	37,568.58	2,752.57	-	-	-	1,497.74	10,935.11	2,293.42	69,982.16
Mass.	16,647.53	51,051.70	1,487.92	511.55	384.92	22.00	896.78	15,233.51	610.16	86,846.07
R.I.	3,313.83	8,755.17	1,275.00	-	170.56	-	-	-	-	13,514.56
Conn.	8,561.87	44,926.67	14,305.34	-	357.20	-	-	27,375.31	8,209.01	103,735.40
N.Y.	27,129.70	165,024.62	20,131.18	-	661.64	17.50	8,522.83	22,436.57	21,792.95	265,716.37
N.J.	12.66	-	-	-	-	-	-	-	-	12.66
Penna.	21,243.13	103,164.44	8,422.78	-	1720.24	-	4,957.14	9,835.39	10,122.99	159,466.11
Totals	132,034.36	538,998.74	57,351.50	511.55	3345.38	39.50	17,104.62	135,623.96	47,302.01	932,311.62
Total	14.2	57.8	6.15	.05	0.3	-	1.8	14.6	5.1	100.0

STATE AND FEDERAL EXPENDITURES IN NORTHEASTERN STATES
DURING CALENDAR YEAR 1938

(Percentage of Total Spent on Each Project)



Total State Expenditures - \$152,022.57



Total State and Federal Expenditures - \$982,311.62

Table 93. SUMMARY OF INITIAL RIBES ERADICATION WORK IN NORTHEASTERN STATES ALL YEARS
INCLUDES ALL RIBES ERADICATION WORK PERFORMED UNDER ALL PROGRAMS. HOWEVER, ALL BLACK CURRANT ELIMINATION AND NURSERY SANITATION PROJECTS SINCE 1929 ARE EXCLUDED.

STATE	1918					1919					1920					1921					1922					1923										
	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost						
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.			Wild	Cult.	Wild	Cult.	Wild	Cult.
MAINE	4910	91,862	235	3,179.23	1.05	18.7	9216	333,775	-	6,136.10	67	362	10,283	176,788	636	4,934.03	.49	172	136,221	56,304	708	3,398.76	.02	4	190,209	449,287	3,688	8,012.48	.04	23	336,432	1,208,998	12,095	13,671.36	.06	3.6
N.H.	66292	959,315	8,427	26,089.09	3.59	14.5	163,413	1,659,936	2,1171	35,371.06	22	101	203,373	2,061,996	22,206	37,038.66	.18	101	137,827	1,654,443	9,713	22,640.93	.16	120	178,489	1,816,829	9,061	28,706.64	.16	102	267,807	3,490,130	24,779	51,604.66	.19	130
V.T.	4656	78,563	77	5,182.64	1.10	16.8	2,460	96,749	-	2,214.26	90	393	4,501	36,294	74	3,391.60	.75	81	6,319	60,537	131	3,464.01	.55	96	13,312	201,906	812	6,130.24	.46	150	23,950	8,080.55	34	11.4		
MASS.	18,706	356,067	1,919	15,805.31	.84	19.0	10,849	201,882	2,374	8,156.18	75	186	19,389	1,224,306	1,421	10,422.87	.34	631	32,933	632,618	4,631	10,290.34	.31	192	64,302	1,578,294	2,368	13,375.09	.21	245	184,988	1,730,693	14,887	26,802.33	.13	9.5
R.I.	12,713	13,927	492	3,327.97	.28	11	40,411	45,320	1,657	3,607.14	14	1.1	23,164	5,973	1,590	3,796.92	.16	3	26,971	16,022	532	3,826.92	.14	6	11,500	11,764	132	1,840.00	.16	1.0	28,068	13,011	1,464	1,701.56	.06	0.5
CONN.	800	-	-	400.00	.50	12.5	2,300	31,000	-	2,323.34	93	12.4	2,170	42,793	2	1,974.70	.19	197	8,000	41,470	6	2,664.07	.33	52	6,175	137,501	-	46,51.30	.75	22.2	14,062	2,08,333	248	6,863.14	.49	20.5
N. Y.	29,337	904,153	11,000	43,676.16	1.48	30.8	23,194	2,181,286	2,675	79,639.08	343	940	7,438	733,790	47	32,043.94	.43	101.3	1,275,709	21	46,600.73	.33	59.9	11,030	654,231	-	34,082.70	3.09	39.3	13,459	906,617	367	44,229.78	2.87	57.3	
ALL STATES	137,458	2,413,987	22,150	99,863.40	.73	17.6	232,043	4,349,948	27,877	139,500.36	55	181	270,318	4,301,940	25,936	93,662.74	.33	159	382,454	3,737,103	15,762	92,885.96	.24	98	473,217	4,849,812	16,061	96,818.63	.24	102	870,766	7,930,028	55,074	158,609.38	.18	10.2

STATE	1924				1925				1926				1927				1928				1929															
	Acres		No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres		No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres		No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres		No. Ribes		Total Cost	Per Acre Cost/Ribes												
	Wild	Cult.	Wild	Cult.			Wild	Cult.	Wild	Cult.			Wild	Cult.	Wild	Cult.			Wild	Cult.	Wild	Cult.														
MAINE	399,987	1,829,349	11,599	22,734.31	.06	4.6	274,034	1,700,870	15,041	20,070.86	.07	6.2	303,709	3,052,360	17,552	29,915.42	.07	10.1	260,471	2,582,159	10,225	22,075.46	.09	99	202,339	1,577,254	8,778	22,417.60	11	7.8	234,459	2,129,942	18,244	21,959.78	.09	9.1
N. H.	324,734	4,023,359	14,941	52,599.44	.16	12.4	237,702	3,180,730	5,996	42,408.99	.18	13.4	178,287	2,968,421	3,612	41,199.78	.23	16.6	151,985	2,176,006	2,169	31,222.55	.21	14.0	153,719	1,864,534	6,178	30,961.38	.20	12.0						
V. T.	24,714	177,187	592	8,951.78	.36	7.2	23,226	310,717	640	8,587.67	.34	12.3	16,800	227,908	1,404	8,281.99	.49	13.6	17,090	262,360	314	7,392.22	.43	15.4	14,473	147,930	144	6,020.30	.42	10.2						
MASS.	158,465	2,023,070	38,777	34,648.43	.22	12.8	190,943	743,446	33,610	21,355.13	.11	3.9	183,085	1,078,021	25,596	26,697.39	.15	5.9	284,411	864,090	32,733	26,077.93	.09	3.0	227,058	497,963	34,146	28,319.43	.13	2.2	243,879	852,565	32,226	29,827.84	.12	3.4
R. I.	47,480	22,361	2,953	2,092.01	.04	0.5	23,640	4,994	1,928	1,519.04	.06	0.2	25,337	16,438	203	1,674.23	.07	0.6	9,733	22,279	521	1,700.86	.18	2.3	1,461	17,777	615	2,629.64	.12	0.8	-	-	-	-	-	-
CONN.	17,215	289,034	2,447	5,981.73	.33	16.7	13,735	270,747	680	4,592.03	.33	19.7	21,687	175,157	318	4,775.59	.22	8.1	12,068	40,441	715	1,784.63	.15	3.4	73,981	98,412	1,289	6,727.34	.09	1.3	28,394	127,124	9,471	71,287.4	.25	4.5
N. Y.	23,198	1,061,368	2,501	40,907.02	1.62	42.1	33,611	993,445	1,153	33,323.38	1.05	29.6	36,994	1,075,841	2,087	37,052.10	1.00	29.1	61,676	1,393,303	2,207	44,809.78	.73	22.6	85,454	1,740,941	9,411	45,370.13	.53	54.0	118,465	1,904,238	6,077	58,923.31	.50	16.1
PENNA.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ALL STATES	997,793	9,425,728	73,810	167,914.72	.17	9.4	800,893	7,206,949	59,048	133,657.10	.17	9.0	766,099	8,594,966	30,772	140,596.70	.18	11.2	797,436	7,341,240	48,884	135,063.45	.17	9.2	770,117	6,121,689	38,459	143,456.81	.19	2.9	796,670	7,270,978	73,154	137,803.18	.20	9.1

STATE	1930				1931				1932				1933				1934				1935																
	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost	Acres	No. Ribes		Total Cost	Per Acre Cost												
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.			Wild	Cult.										
MAINE	197,075	2,096,207	10,357	23,463.51	.12	10.6	114,544	1,286,322	4,846	18,429.69	.16	11.2	31,131	733,489	3,569	11,981.89	.23	14.4	73,133	1,885,866	4,919	37,137.52	.51	25.8	89,896	3,880,322	2,318	57,368.50	62	43.2	134,917	4,965,441	2,944	105,269.31	.78	36.8	
N. H.	218,137	2,807,150	3,192	47,766.94	.22	12.9	158,004	2,891,692	4,022	46,596.31	.30	18.3	79,924	866,328	1,066	14,704.96	.18	10.8	77,073	4,122,871	752	48,211.90	.63	33.5	75,478	3,300,360	8	45,634.53	61	46.4	89,310	3,469,646	375	63,255.07	.71	38.8	
V.T.	7,245	74,039	83	4,243.43	.59	10.2	8,125	38,827	129	3,144.50	.39	4.8	7,476	34,525	4,060	2,361.18	.32	4.6	17,280	232,624	225	12,095.21	.70	13.5	19,483	463,240	20	14,511.69	.75	23.8	28,248	478,377	210	23,058.50	82	16.9	
MASS.	108,683	996,376	8,072	15,294.78	.14	9.2	29,815	128,179	4,270	6,491.93	.22	4.3	13,584	106,377	967	3,196.38	.24	7.8	14,003	223,388	48	5,545.16	.40	16.0	12,713	834,977	1,673	11,352.77	89	65.7	45,417	753,168	14,522	28,499.50	63	16.6	
R. I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CONN.	27,253	33,330	3,140	3,013.79	.11	1.2	1,310	25,776	260	730.05	.48	17.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
N. Y.	89,894	1,306,498	4,302	47,116.14	.52	14.5	118,353	1,484,224	4,956	35,433.61	.47	12.3	145,075	1,223,388	6,198	49,370.12	.34	8.3	73,773	659,088	3,113	31,633.48	.42	8.7	182,389	3,687,497	8,115	111,684.67	61	31.2	245,452	6,418,062	13,060	213,958.17	87	26.1	
N. J.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PENNA.	11,743	656,768	863	8,631.48	.74	55.9	24,016	828,958	703	9,979.18	.42	34.5	20,212	802,027	3,342	6,064.70	.30	39.7	19,799	1,704,794	212	22,368.01	1.13	86.1	33,184	4,967,191	2,324	57,171.25	1.17	14.7	64,879	6,244,326	8,482	110,789.03	1.71	96.2	
ALL STATES	660,032	7,970,368	30,009	14,930.09	.23	12.1	454,367	6,683,978	19,186	140,805.07	.31	14.7	317,919	3,768,737	19,416	87,925.98	.28	11.9	277,145	8,828,780	9,269	157,088.35	.57	31.9	461,888	19,433,896	17,023	308,140.46	.57	42.1	684,285	227,19,742	44,440	574,553.62	.84	33.2	

STATE	1936				1937				SUB-TOTALS				INCLUSIVE				1938				GRAND TOTALS				1918 - 1938		INCL. Per Acre Cost Ribes				
	Acres		Per Acre Cost Ribes	Total Cost	No. Ribes		Per Acre Cost Ribes	Total Cost	Acres		As Reported	As Adjusted	No. Ribes		Per Acre Cost Ribes	Total Cost	No. Ribes		Per Acre Cost Ribes	Total Cost	Acres		Wild	Cult.	Total Cost						
	Wild	Cult.			Wild	Cult.			Wild	Cult.			Wild	Cult.			Wild	Cult.			Wild	Cult.				Wild		Cult.	Wild	Cult.	Wild
MAINE	153,642	919,332	4,162	123,088.23	.80	59.9	37,357	1,816,977	791	32,699.81	.87	48.4	3,234,207	2,216,296	41,054.964	132,907	584,929.87	.26	18.5	28,142	1,443,244	1,748	30,337.89	1.08	51.3	2,244,438	42,498,208	134,655	615,267.76	27	18.9
N. H.	140,940	6,266,569	4,550	106,642.83	.76	44.5	35,295	1,595,676	1,209	26,553.70	.74	45.2	3,085,128	3,085,128	58,418.623	147,503	832,412.57	.27	17.3	31,388	1,007,895	289	21,497.05	.68	32.1	3,116,516	54,427,518	147,792	853,909.62	27	17.5
V.T.	85,839	4,273,925	1,916	102,131.40	1.19	49.8	32,736	1,096,116	819	24,364.24	.76	33.5	370,472	3,844,032	8,651,955	13,201	259,445.10	.68	22.5	28,473	674,842	1,095	21,382.97	.75	23.7	412,505	3,326,797	14,376	280,828.07	.68	22.6
MASS.	59,630	791,298	889	35,943.29	.60	13.3	14,040	1,606,614	159	3,544.10	.37	10.8	1,917,695	1,917,695	255,288	363,466.62	.19	8.2	31,199	183,298	970	7,204.59	.23	5.9	1,948,894	15,958,690	256,258	371,051.21	.19	8.2	
R. I.	4,199	4,087	443	2,933.48	.70	1.0	7,239	6,856	297	3,483.70	.48	0.9	310,954	3,109,954	214,672	18,341	43,834.16	.14	0.7	6,872	24,162	—	—	—	—	317,826	2,388,834	13,341	47,287.64	.15	0.8
CONN.	42,269	137,756	2,940	14,935.32	.35	3.3	5,144	11,743	315	2,933.63	.32	2.3	361,328	393,525	2,195,132	27,209	101,135.16	.26	5.6	1,618	16,48	1,648	6,359.68	.62	1.3	403,756	2,208,750	28,857	107,472.81	.27	5.3
N. Y.	429,837	13,618,021	23,791	425,187.91	.99	31.7	17,820	3,556,617	4,762	159,289.72	.89	31.2	1,926,817	1,926,817	50,798,919	104,843	1,636,484.93	.85	26.4	135,448	3,156,594	4,640	127,257.63	.94	23.3	2,062,265	53,958,513	110,493	1,763,742.56	.86	26.2
N. J.	2,565	7,199	199	2,910.87	.99	2.6	—	—	—	—	—	—	16,742	16,742	47,780	1,715	5,284.33	.32	2.9	—	—	—	—	—	—	16,742	47,780	1,713	5,284.33	.32	2.9
PENNA.	129,384	716,733	12,975	203,695.67	1.57	55.3	64,207	2,863,279	2,418	85,467.81	1.29	43.2	375,685	375,685	25,564,348	40,180	507,923.39	1.35	48.2	59,552	2,432,117	3,461	74,781.03	1.27	41.6	43,4037	28,016,465	42,341	592,704.42	3.34	64.6
ALL STATES	1,048,305	41,463,136	31,865	1,016,849.20	.97	39.6	377,223	13,107,878	17,770	340,364.71	.90	34.7	11,598,428	10,626,274	197,722,785	735,368	4,333,294.13	.41	18.6	330,705	8,553,770	13,851	292,254.25	.88	27.1	1,015,979	20,678,555	749,816	4,627,548.42	.42	18.9

Table 94.

SUMMARY OF RIBES RE-ERADICATION WORK IN NORTHEASTERN STATES - ALL YEARS

INCLUDES ALL RIBES ERADICATION WORK PERFORMED UNDER ALL PROGRAMS. HOWEVER, ALL BLACK CURRANT ELIMINATION AND NURSERY SANITATION PROJECTS SINCE 1929 ARE EXCLUDED

STATE	1923					1924					1925					1926					1927				
	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.		
MAINE	20	284	-	580	29.14	1240	17,608	-	359,60	29.14	644	9,145	-	186,76	29.14	728	54,199	10	364,59	51.74	1,010	19,480	-	439,25	43.19
N. H.	430	6,603	-	4682	11.11	6,668	75,168	48	990,79	15.11	24,008	113,221	406	2,516.61	11.47	32,046	153,488	617	4,408.89	14.50	74,034	496,160	341	9,850.29	13.67
V.T.	1,240	6,324	-	417.88	34.51	974	4,967	-	328.24	34.51	1,396	7,120	-	470.45	34.51	5,850	29,835	-	1,971.45	34.51	2,315	18,421	-	841.79	36.79
MASS.	16,943	25,414	-	1,609.59	10.15	1,311	1,966	-	124.55	10.15	4,256	6,384	-	404.32	10.15	6,145	9,218	-	583.78	10.15	14,942	42,400	27	1,862.08	13.28
R. I.	3,240	1,264	-	194.40	06.04	5,000	2,350	-	210.00	04.05	-	-	-	-	-	2,670	1,197	-	250.00	09.05	-	-	-	-	-
CONN.	-	-	-	-	-	-	-	-	-	-	2,371	2,050	4	903.27	38.09	570	7,659	12	286.76	50.13	8,836	112,384	493	6,848.57	78.13
N. Y.	-	-	-	-	-	-	-	-	-	-	1,326	1,420	-	463.98	35.11	1,079	1,499	-	77.66	07.14	1,279	16,741	-	714.18	56.13
ALL STATES	21,873	39,889	-	2,274.49	10.18	13,193	102,059	48	2,013.18	13.67	34,001	139,340	410	4,945.39	15.41	49,088	263,105	699	7,941.13	16.54	102,416	705,586	861	20,553.10	20.69

STATE	1928					1929					1930					1931					1932				
	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.		
MAINE	708	18,538	-	180.30	26.26	232	34,771	-	234.60	10.14	810	27,570	216	578.95	72.34	2,165	70,096	134	1,395.09	64.32	30,436	287,497	1,157	7,285.10	24.94
N. H.	83,201	261,126	1,144	9,272.61	11.31	96,425	236,445	466	9,648.02	10.25	6,733	33,080	5	829.27	12.49	21,357	130,583	200	3,649.78	17.61	17,308	208,690	79	2,942.97	17.12
V.T.	2,292	11,410	52	866.07	38.50	3,005	22,786	56	1,249.60	42.76	5,877	20,572	25	1,660.26	28.35	3,535	10,287	3	980.77	28.29	4,373	24,251	697	1,414.36	32.55
MASS.	15,875	25,437	7	1,249.81	08.16	20,961	16,194	655	2,658.67	13.08	28,108	27,995	83	2,825.55	10.10	85,714	136,036	2,388	6,624.90	08.16	148,022	227,776	2,104	13,441.03	09.18
R. I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONN.	1,124	24,973	75	1,286.50	11.42	6,203	7,283	1,451	905.80	15.12	2,342	10,829	455	1,227.67	52.46	4,540	85,051	-	4,005.85	88.18	7,337	134,456	1,216	4,592.40	63.18
N. Y.	10,395	216,828	824	5,035.30	48.20	9,291	78,433	668	6,543.17	70.84	8,327	95,691	169	3,014.16	36.11	5,205	18,706	67	1,331.05	26.36	10,822	72,265	340	4,116.81	38.67
PENNA.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39,384	-	1,047.33	74.28	2,428	57,059	7	1,846.45	76.23
ALL STATES	113,595	558,312	2,102	17,890.59	16.49	136,117	395,912	3,296	21,239.86	16.29	52,197	215,737	953	10,135.86	19.41	123,924	490,143	2,792	19,034.77	15.40	226,701	1,017,589	5,675	37,057.43	16.45

STATE	1933					1934					1935					1936					1937				
	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost	Acres Re-examined	No. Ribes		Total Cost	Per Acre Cost
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.		
MAINE	23,047	365,439	68	6,900.38	30.15	28,823	290,762	28	7,711.38	27.10	64,166	1,063,168	446	37,661.57	59.16	203,794	4,377,479	9,059	110,753.86	54.21	74,842	1,434,301	584	36,841.37	49.19
N. H.	21,453	571,195	5	8,232.92	38.26	10,967	388,588	-	4,815.13	44.35	57,413	1,438,645	149	37,897.88	66.25	165,947	3,797,938	1,195	99,733.46	60.22	66,838	936,627	223	33,167.35	50.14
V.T.	9,939	90,521	3	7,197.26	72.91	12,690	258,508	-	10,762.31	85.20	22,633	254,089	110	16,700.46	74.11	27,315	720,273	469	27,455.54	1,01.26	15,938	191,604	139	10,548.11	66.12
MASS.	83,104	330,385	2821	14,218.90	17.40	110,419	256,113	1,499	14,413.42	13.23	66,914	627,044	2,739	43,140.86	65.94	68,175	1,112,632	3,029	60,448.00	89.16	42,145	695,894	932	24,038.67	57.16
R. I.	5,233	34,59	86	4,433.53	85.07	4,1726	74,730	532	13,297.35	32.18	72,260	93,682	3,147	28,834.74	40.13	92,243	85,172	4321	30,979.23	34.09	30,510	46,255	214	11,189.72	37.15
CONN.	42,513	300,299	109	16,628.59	39.71	36,537	782,593	74	24,768.31	68.21	56,233	781,670	2,606	36,659.22	65.13	36,705	519,811	854	31,388.66	86.14	52,715	200,952	619	20,653.85	39.38
N. Y.	65,550	1,268,914	283	41,450.32	63.19	81,868	619,259	4,726	37,950.22	46.76	79,504	1,147,014	790	43,818.94	55.14	115,220	2,328,262	2,446	97,461.89	85.20	32,742	585,023	270	25,072.11	77.17
N. J.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PENNA.	24,871	991,852	51	29,477.37	119.39	28,155	1,029,235	62	42,690.37	152.36	21,790	703,755	1,185	33,262.88	153.32	26,674	1,262,042	688	44,272.64	166.47	22,352	207,760	360	25,929.38	116.93
ALL STATES	275,710	3,922,064	3,426	128,539.27	47.14	351,185	3,699,788	6,921	156,408.49	45.10	440,913	6,109,067	11,172	277,976.55	63.13	736,073	14,203,609	22,061	502,493.28	68.19	339,499	4,293,372	3,356	189,071.92	56.12

STATE	SUB-TOTALS 1923-1938 INCLUSIVE										1938						GRAND TOTALS 1923-1938 INCL.					
	Acres Re-examined		No. Ribes		Total Cost	Per Acre		Acres		No. Ribes		Total Cost	Per Acre		Acres		No. Ribes		Total Cost	Per Acre		
	As Reported	As Adjusted*	Wild	Cult.		Cost	Ribes	Re-examined	Wild	Cult.	Cost		Ribes	Re-examined	Wild	Cult.	Cost	Ribes				
MAINE	432 665	432 665	8 070 337	11 702	210 897.60	.49	18 7	87 836	1 319 791	1 270	49 846.28	.57	15 0	520 501	9 390 128	12 972	260 743.88	50	18 0			
N. H.	684 828	684 828	8 853 557	4 930	228 000.79	.33	12 9	49 806	754 073	272	26 826.34	.54	15 1	734 634	9 607 630	5 210	254 827.13	.35	13 1			
V.T.	119 372	105 812	1 670 968	1 954	82 864.49	.78	15 8	20 248	454 891	315	16 185.61	.80	22 5	126 060	2 125 859	1 869	99 050.10	.79	16 9			
MASS.	713 034	713 034	3 540 888	16 284	187 644.13	.26	5 0	86 575	741 397	3 101	43 847.11	.51	8 6	799 609	4 282 285	19 385	231 491.24	.29	5 4			
R. I.	258 857	258 857	313 704	8 375	90 807.28	.35	1 2	11 346	19 304	1 374	5 301.69	.47	1 7	270 203	333 008	9 749	96 108.97	.36	1 2			
CONN.	258 026	225 829	2 970 020	7 968	150 155.45	.66	13 2	56 486	644 796	1 163	38 587.02	.68	11 4	282 315	3 614 816	9 131	188 742.47	.67	12 8			
N. Y.	422 608	422 608	6 430 085	10 583	267 049.79	.63	15 2	77 305	612 218	6 68	37 766.99	.49	7 9	499 913	7 042 273	11 251	304 816.78	.61	14 1			
N. J.	1 417	1 417	16 956	15	1 631.36	1.15	12 0	-	-	-	-	-	-	1 417	16 956	15	1 631.36	1.15	12 0			
PENNA.	127 678	127 678	4 291 087	2 353	178 526.42	1.40	33 6	21 262	297 540	67	28 383.41	1.34	14 0	148 940	4 588 687	2 420	206 909.83	1.39	30 8			
ALL STATES	3 018 485	2 972 728	36 157 572	63 772	1 397 577.31	.47	12 2	410 864	4 844 010	8 230	246 744.45	.61	11 8	3 383 592	41 001 582	72 002	1 644 321.76	.49	12 1			

Table 95. SUMMARY OF RIBES ERADICATION WORK IN NORTHEASTERN STATES - ALL YEARS

INITIAL AND RE-ERADICATION WORK

(INCLUDES ALL RIBES ERADICATION WORK PERFORMED UNDER ALL PROGRAMS. HOWEVER, ALL BLACK CURRANT ELIMINATION AND NURSERY SANITATION PROJECTS SINCE 1929 ARE EXCLUDED)

STATE	1918					1919					1920					1921					1922					1923										
	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes						
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.			Wild	Cult.	Wild	Cult.		
MAINE	4,910	91,862	235	5,179.23	1.05	18.7	9,216	333,775	-	6,136.10	.67	36.8	10,283	176,788	636	4,994.05	.49	17.2	156,221	56,304	708	3,398.76	.02	.4	190,209	449,287	3,688	8,012.48	.04	.23	336,452	1,209,282	12,095	19,333.16	.06	3.6
N. H.	66,292	259,315	8,427	26,089.09	.39	14.5	163,413	1,659,936	21,171	35,371.86	.22	10.2	203,373	2,061,996	22,206	37,038.66	.18	10.1	137,827	1,654,443	2,713	22,640.93	.16	12.0	178,489	1,816,829	9,061	28,706.64	.16	10.2	268,237	3,496,733	24,779	31,651.48	.19	13.3
V.T.	4,698	78,563	77	5,182.64	1.10	16.8	2,460	96,749	-	2,214.26	.90	39.3	4,501	36,294	74	3,391.60	.75	8.1	6,319	60,537	131	3,464.01	.55	9.6	13,512	201,906	812	6,150.24	.46	15.0	25,190	278,570	1,234	8,498.43	.34	11.0
MASS.	18,706	356,067	1,919	15,805.31	.84	19.0	10,849	201,882	2,374	8,156.18	.75	18.6	19,309	1,224,306	14,211	10,422.87	.54	63.1	32,933	632,618	4,631	10,290.54	.31	19.2	64,302	1,578,294	2,368	13,375.09	.21	24.5	201,931	1,776,107	14,887	28,411.92	.14	7.8
R. I.	12,715	13,927	492	3,527.97	28	1.1	40,411	-	1,657	5,609.74	.14	1.1	23,164	5,973	1,550	3,796.92	.16	.3	2,971	16,022	552	3,262.92	.14	6	6,302	11,764	132	1,840.00	.16	1.0	31,308	14,275	1,464	1,895.96	.06	.05
CONN.	800	10,000	-	Est. 400.00	50	12.5	2,500	31,000	-	2,323.34	.93	12.4	2,170	42,793	2	1,974.70	.91	19.7	8,000	41,470	6	2,664.07	.33	5.2	6,175	137,501	-	4,651.50	.75	22.2	14,062	288,333	248	6,863.14	.49	20.5
N. Y.	29,337	904,153	11,000	43,679.16	1.48	30.8	231,94	2,181,286	2,675	79,689.08	34.3	94.0	7438	753,790	47	32,043.94	4.31	101.3	14,183	1,275,709	21	46,600.73	3.29	85.9	11,030	654,231	-	34,082.70	3.09	59.3	15,459	906,617	367	44,229.78	2.87	57.3
ALL STATES	137,458	2,413,887	22,150	99,863.40	.73	17.6	252,043	4,549,948	27,877	139,500.56	.55	18.1	270,318	4,301,940	25,936	93,662.74	.35	15.9	382,454	3,737,103	15,762	92,885.96	.24	9.8	475,217	4,849,812	16,061	96,818.65	.20	10.2	892,639	7,969,917	55,074	160,883.87	.18	8.9

STATE	1924					1925					1926					1927					1928					1929										
	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes						
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.			Wild	Cult.	Wild	Cult.		
MAINE	401,227	1,846,957	11,599	23,093.91	.06	4.6	274,678	1,710,015	15,041	20,257.62	.07	6.2	304,437	3,106,579	17,562	21,280.01	.07	10.2	261,481	2,601,639	10,225	22,513.71	.09	9.9	203,067	1,595,792	8,778	22,597.90	.11	7.9	234,691	2,164,713	18,244	22,194.38	.10	9.2
N. H.	331,402	4,098,527	14,989	53,590.23	.16	12.4	261,710	3,293,951	6,402	44,925.60	.17	12.6	210,333	3,127,909	4,289	45,606.67	.22	14.9	226,019	2,672,166	2,510	41,072.84	.18	11.8	228,530	2,302,538	5,220	40,844.96	.18	10.1	252,144	2,102,999	6,644	40,609.40	.16	8.3
V. T.	25,688	192,154	592	9,280.02	.36	7.1	26,622	317,837	640	9,058.12	.34	11.9	22,650	257,743	1,404	10,253.44	.45	11.4	19,405	280,781	314	8,233.95	.42	14.4	16,767	159,340	196	6,886.37	.41	9.5	13,300	110,671	453	6,495.47	.49	8.3
MASS.	159,776	2,025,036	38,777	34,772.98	.22	12.6	195,201	751,830	33,610	21,759.45	.11	3.8	189,230	1,088,039	25,596	27,281.37	.14	5.7	299,353	906,490	32,760	27,940.03	.09	3.1	242,933	523,400	34,153	29,769.26	.12	2.2	264,840	841,759	32,881	32,486.51	.12	3.2
R. I.	52,480	24,711	2,953	2,302.01	.04	5	25,640	4,994	1,928	1,519.04	.06	0.2	28,207	17,635	203	1,924.23	.07	0.6	9,735	22,279	521	1,700.86	.18	2.3	21,461	17,777	615	26,296.64	.12	0.8	-	-	-	-	-	-
CONN.	17,215	289,034	2,447	5,981.73	.35	16.7	16,106	272,797	684	5,495.30	.34	16.9	22,257	182,826	330	5,062.35	.23	8.2	20,904	152,825	1,208	8,633.20	.41	7.3	75,105	123,385	1,364	8013.84	.11	1.6	34,597	134,407	10,922	8,034.54	.23	3.9
N. Y.	25,196	1,061,368	2,501	40,907.02	1.62	42.1	34,937	994,865	11,553	35,787.36	1.02	28.4	38,073	1,077,340	2,087	37,129.76	.98	28.3	62,955	1,410,646	2,207	45,523.96	.72	22.4	95,849	1,957,769	10,235	50,605.43	.53	20.4	127,756	1,982,671	6,745	65,466.48	.51	15.5
PENNA.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ALL STATES	1,012,986	9,527,787	73,858	169,927.90	.17	9.4	834,894	7,346,289	59,458	138,802.49	.17	8.8	815,187	8,858,071	51,471	148,537.83	.18	10.9	899,852	8,046,826	49,745	155,618.55	.17	8.9	883,712	6,680,001	60,561	161,347.40	.18	7.6	932,787	7,666,890	76,450	179,043.04	.19	8.2

STATE	1930					1931					1932					1933					1934					1935										
	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes	Acres	No. Ribes		Total Cost	Per Acre Cost/Ribes						
		Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.				Wild	Cult.			Wild	Cult.	Wild	Cult.	Wild	Cult.
MAINE	197885	2,123,777	10,573	24,042.46	.12	10.7	116,709	1,356,418	4,980	19,824.78	.17	11.6	81,587	1,022,986	4,726	19,266.99	.24	12.5	2,251,325	4,987	44,037.90	.46	23.4	118,719	4,171,084	2,346	63,349.88	.53	35.1	199,083	6,028,609	3,390	142,930.88	.72	30.3	
N. H.	224,870	2,840,230	3,197	48,596.21	.22	12.6	179,361	3,022,275	4,222	50,246.09	.28	16.9	97,232	1,075,218	1,145	17,647.93	.18	11.1	98,528	4,694,066	.757	56,444.82	.57	47.6	86,445	3,888,948	8	52,379.66	.61	45.0	146,731	4,908,291	524	101,152.95	.69	33.5
V.T.	13,122	94,611	108	5,903.71	.45	7.2	11,660	49,114	132	41,250.7	.35	4.2	11,849	58,776	4,757	3,775.54	.32	50	27,219	323,145	.228	19,292.47	.71	11.9	32,173	721,748	20	23,274.00	.79	22.4	50,881	732,466	320	39,158.96	.78	14.4
MASS.	136,791	1,024,371	8,155	18,120.33	.13	7.5	115,529	264,215	6,658	13,116.83	.11	2.3	161,606	334,353	3,071	16,637.41	.10	2.1	97,107	553,777	.2869	13,764.06	.20	5.7	123,132	1,091,090	3,172	25,766.19	.21	8.9	112,331	1,382,212	17,261	71,640.36	.64	12.3
R. I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CONN.	29,595	441,559	3,595	4,241.46	.14	1.5	6,050	110,827	260	4,735.90	.78	18.3	7,357	134,456	1,216	4,592.40	.63	18.3	42,513	300,299	.109	16,628.59	.39	7.1	72,587	860,580	1,276	34,088.43	.47	11.9	104,548	1,138,198	6,782	57,232.66	.55	10.9
N. Y.	98,221	1,402,189	4,471	50,130.30	.51	14.3	123,558	1,502,930	5,023	56,764.66	.46	12.2	155,897	1,295,653	6,538	53,486.93	.34	8.3	141,323	1,928,002	.3396	73,083.90	.52	13.6	264,257	6,306,756	12,941	149,634.89	.57	23.9	324,956	7,565,076	13,850	251,677.11	.79	23.3
N. J.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PENNA.	11,745	656,769	863	8,631.48	.74	55.9	25,424	868,342	703	11,026.31	.43	34.2	22,640	855,086	3,349	7,911.15	.35	37.9	44,670	2,696,646	.263	51,845.38	1.16	60.4	61,339	5,996,426	2,386	99,861.62	1.63	97.8	18,669	69,448,081	9,667	144,051.91	1.66	80.2
ALL STATES	712,229	8,186,105	30,962	159,665.95	.22	11.5	578,291	7,174,121	21,978	159,839.84	.28	12.4	544,620	4,786,326	25,091	124,983.41	.23	8.8	552,855	12,750,844	12,695	28,527.62	.52	23.1	813,073	23,133,684	23,944	46,454,893	.57	28.5	112,519	28,828,809	55,612	832,530.17	.76	25.6

BLISTER RUST CONTROL ACTIVITIES AND ACCOMPLISHMENTS
UNDER ALL PROGRAMS IN THE NORTHEASTERN STATES
DURING PERIOD 1918-1938, INCLUSIVE

Table 96 Summary of All Ribes Eradication Work in Northeast States
During Period 1918-1938, Inclusive - By Program

Program		Regular Cooperative	C.C.C.	P.W.A.	Federal W.P.A.	State Local W.P.	C.W.A. and E.R.A.	A.R.A.	S.C.S.	N.Y.A.	Totals
Total	Initial	8,065,310	1,246,196	179,970	1,365,943	10,000	20,547	10,639	12,211	348	10,911,222
Acreage	Re-Erad.	1,317,676	964,452	162,541	926,473	42,000	7,704	5,714	469	-	3,429,349
Worked	Total	9,382,986	2,210,648	342,511	2,292,421	52,000	28,251	16,353	12,680	348	14,340,571
Number	Initial	100,317,050	46,489,000	7,639,253	50,561,547	922,000	174,137	112,491	458,474	4,242	206,678,555
Wild Ribes	Re-Erad.	7,590,986	14,060,744	1,368,399	17,525,202	271,000	158,586	13,779	12,647	-	41,001,582
Pulled	Total	107,908,036	60,549,744	9,007,652	68,086,749	1,193,000	332,723	126,270	471,121	4,242	247,680,137
Number	Initial	607,053	68,443	7,297	62,504	1,000	1,600	948	216	-	749,816
Cult. Ribes	Re-Erad.	23,100	16,324	5,379	25,838	500	306	110	-	-	72,002
Pulled	Total	630,153	84,767	12,676	88,342	1,500	1,906	1,058	216	-	821,818
Total	Initial	644,760	619,288	33,419	354,586	3,500	4,500	3,564	7,434	84	1,671,161
Man	Re-Erad.	80,410	366,115	16,156	178,622	5,000	3,270	772	601	-	651,308
Days	Total	725,170	985,403	49,575	533,208	8,500	7,770	4,336	8,035	84	2,322,469
Total Cost of All Ribes Erad. Work	Local Coop.	1,010,857.57	-	3,793.65	30,876.94	2,400.00	1,143.00	-	-	-	1,049,091.26
	State	1,056,530.16	28,716.53	13,420.75	77,471.83	5,000.00	2,791.98	305.80	1,843.84	100.00	1,181,237.29
	B.P.I.	266,286.41	-	-	-	-	-	-	-	-	266,286.41
	B.E. & P.Q.	63.05	-	-	8.53	-	-	-	-	-	71.58
	Park Service	8,345.53	-	-	-	-	-	-	-	-	8,345.53
	Forest Service	2,251.39	-	-	-	-	-	-	-	-	2,251.39
	C.C.C.	-	1,572,955.24	-	-	-	-	-	-	-	1,572,955.24
	P.W.A.	-	-	181,881.14	-	-	238.20	-	-	-	182,119.34
	W.P.A.	38.03	-	-	1,913,586.40	40,370.00	-	-	245.76	-	1,954,249.94
	C.W.A. & E.R.A.	-	-	-	-	-	27,902.90	-	-	-	27,902.90
	A.R.A.	-	-	-	-	-	-	15,057.94	-	-	15,057.94
	S.C.S.	-	-	-	-	-	-	-	12,080.56	-	12,080.56
	N.Y.A.	-	-	-	-	-	-	-	-	220.80	220.80
	Total	2,344,372.14	1,601,671.77	199,095.54	2,021,943.70	42,850.00	32,076.08	15,363.74	14,170.16	320.80	6,271,870.18
Per Acre	Cost	.250	.725	.581	.882	.000	1.14	.940	1.12	.922	.437
Values for	Ribes	11.5	27.4	26.3	29.7	0.0	11.8	7.7	37.2	12.2	17.3
All Work	Man Days	.08	.45	.14	.23	.00	.28	.27	.63	.24	.16

Note: Acreage of initial Ribes eradication work under Regular Cooperative Program adjusted by deducting 1,017,911 acres from total of yearly acreages reported since 1918. This reduction represents eliminated area that was included in original acreage figures for Maine during period 1921-1930, inclusive, as explained under Table 95.

In Table 96, which summarizes the eradication work by programs, it is not possible to adjust the re-eradication acreages as in Table 94, which lists the totals by states.

COMPARISON OF RIBES PER ACRE AND MAN HOURS PER ACRE
NORTHWESTERN STATES - 1938-1939, INCLUSIVE

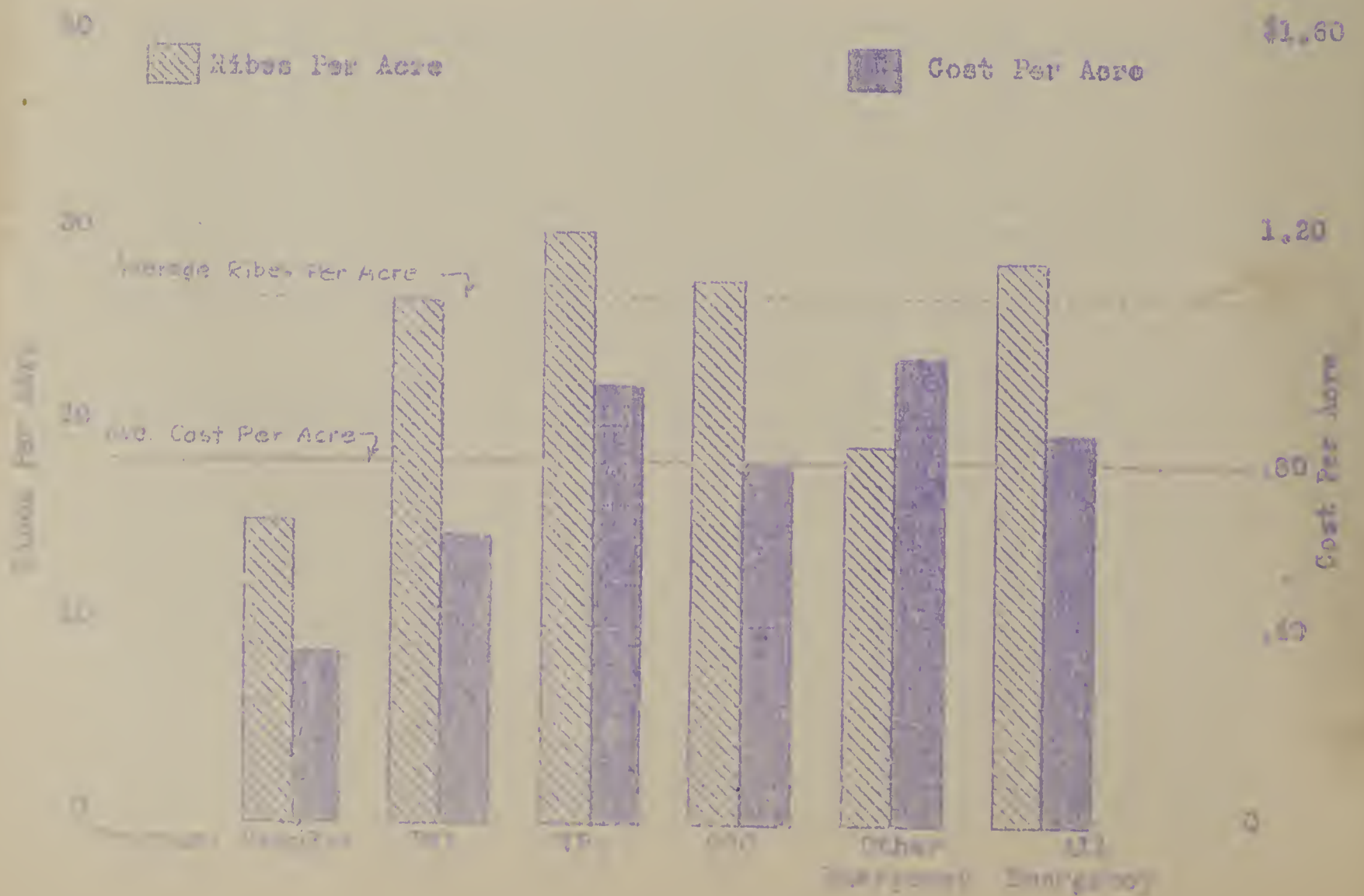
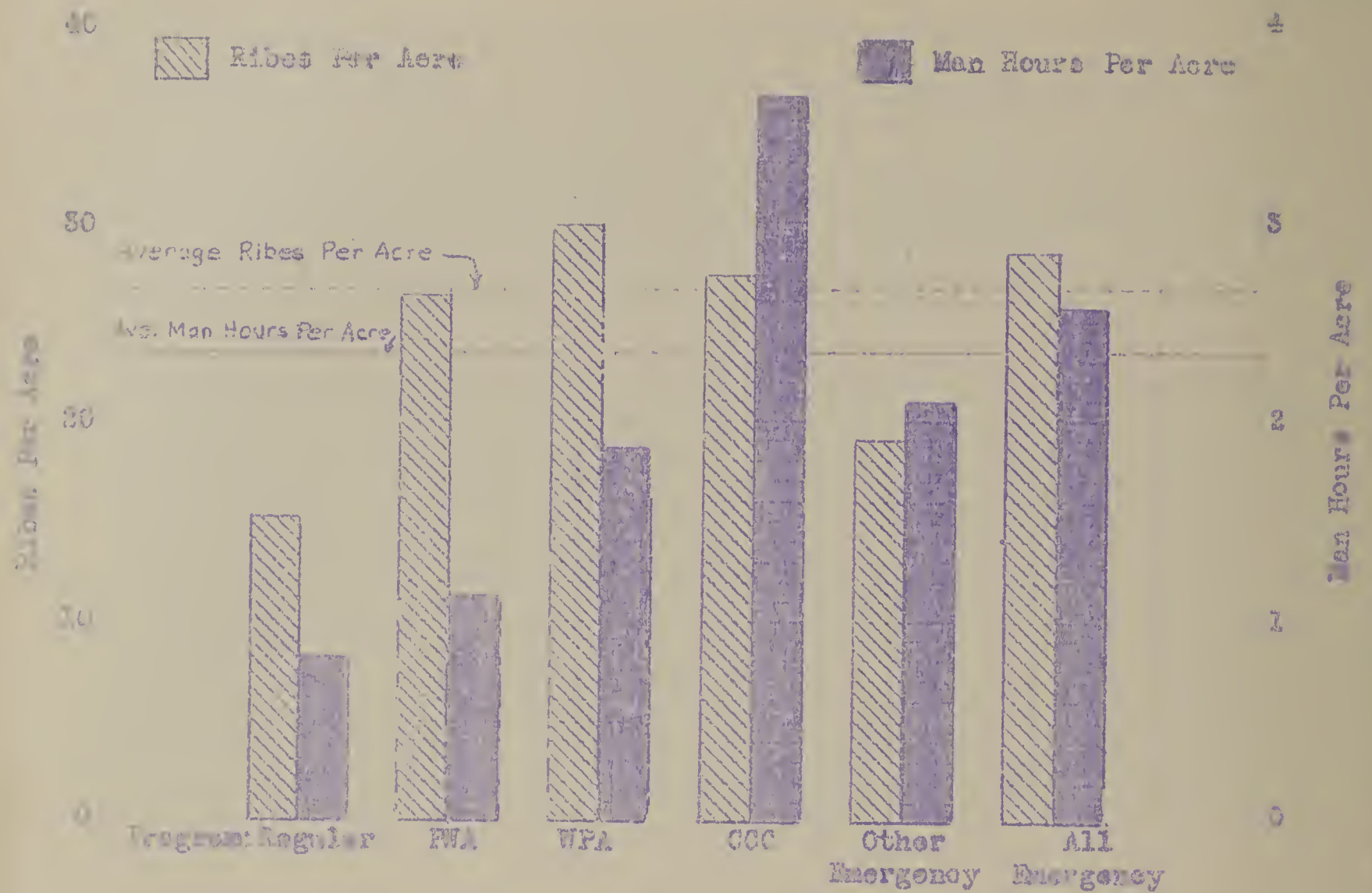


Table 97 - Ribes Eradication Work Performed on Federal Lands in Northeastern States During Period 1924-1938, Inclusive (Regular and C.C.C. Programs).

Project	Type of Erad.	Total Acreage Worked	Ribes Pulled		Total Man Days	Cost					Per Acre		
			Wild	Cult.		C.C.C.	B.P.I.	Forest Service	Park Service	State	Total	Cost	Ribes Days
Adirondack National Park, Mo.	Initial	19,632	866,007	298	10,774	12,636.52	3145.83	-	8345.53	-	24,027.88	1.22	44.1
	Re-Erad.	8,784	33,204	-	3,396	5,640.89	-	-	-	-	5,640.89	.641	3.8
	Total	28,426	899,211	298	14,170	18,177.41	3145.83	-	8345.53	-	29,668.77	1.04	31.6
White Mt. National Forest, N.H.	Initial	8,673	816,001	85	2,873	3,411.89	75.63	1471.62	-	224.11	5,183.25	.598	94.1
	Re-Erad.	3,593	271,670	-	1,545	2,426.07	-	-	-	-	2,426.07	.692	75.6
	Total	12,266	1,087,671	85	4,418	5,836.96	75.63	1471.62	-	224.11	7,668.32	.625	88.7
Allegheny National Forest, Pa.	Initial	4,158	759,375	30	2,243	3,166.92	136.56	507.71	-	-	3,811.19	.917	182.6
	Re-Erad.	1,152	61,061	-	542	646.41	71.29	272.06	-	-	989.76	.859	53.0
	Total	5,310	820,436	30	2,788	3,813.33	207.85	779.77	-	-	4,800.95	.904	154.5
Totals	Initial	32,463	2,441,383	408	15,893	19,115.33	3358.02	1979.33	8345.53	224.11	33,022.32	1.02	75.2
	Re-Erad.	13,539	365,935	-	5,483	8,772.37	71.29	272.06	-	-	9,115.72	.673	27.0
	Total	46,002	2,807,318	408	21,376	27,887.70	3429.31	2251.39	8345.53	224.11	42,138.04	.916	61.0
Percentage of total cost by cooperating agencies						66.2	8.1	5.4	19.8	0.5	100.0	-	-

Basis of costs: See Page 25 for work performed under Regular Cooperative Program and Page 46 for C.C.C. activities.

Data in above table are included in preceding Ribes eradication summaries of work under Regular Cooperative and C.C.C. Programs - also in Tables 93 to 95, inclusive.

Table 98 - Total Control Area and Acreage of White Pine in Control Area in Each of The Northeastern States.


State	Acreage of Present Control Area			Acreage of White Pine in Present Control Area		
	In Townships Comprising Permanent Pine Production Area	In Townships Outside Permanent Pine Production Area	Total	In Townships Comprising Permanent Pine Production Area	In Townships Outside Permanent Pine Production Area	Total
Maine	2,505,325	267,314	2,772,637	982,213	95,817	1,078,030
N. H.	3,185,640	0	3,185,640	1,448,059	0	1,448,059
N. J.	845,335	25,281	871,616	181,196	4,504	185,700
N. Y.	1,804,291	60,836	1,865,127	722,661	19,524	742,185
R. I.	333,766	0	333,766	90,838	0	90,838
Verm.	367,723	136,014	503,737	81,975	14,083	96,058
N. Y.	2,841,116	84,167	2,925,283	862,909	14,412	877,321
N. J.	16,742	18,900	35,642	3,771	2,700	6,471
Conn.	1,050,690	108,284	1,158,934	168,032	7,842	175,874
Total	12,951,626	700,808	13,652,432	4,541,682	158,882	4,700,564

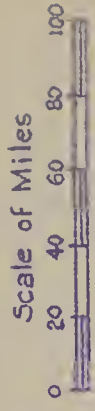
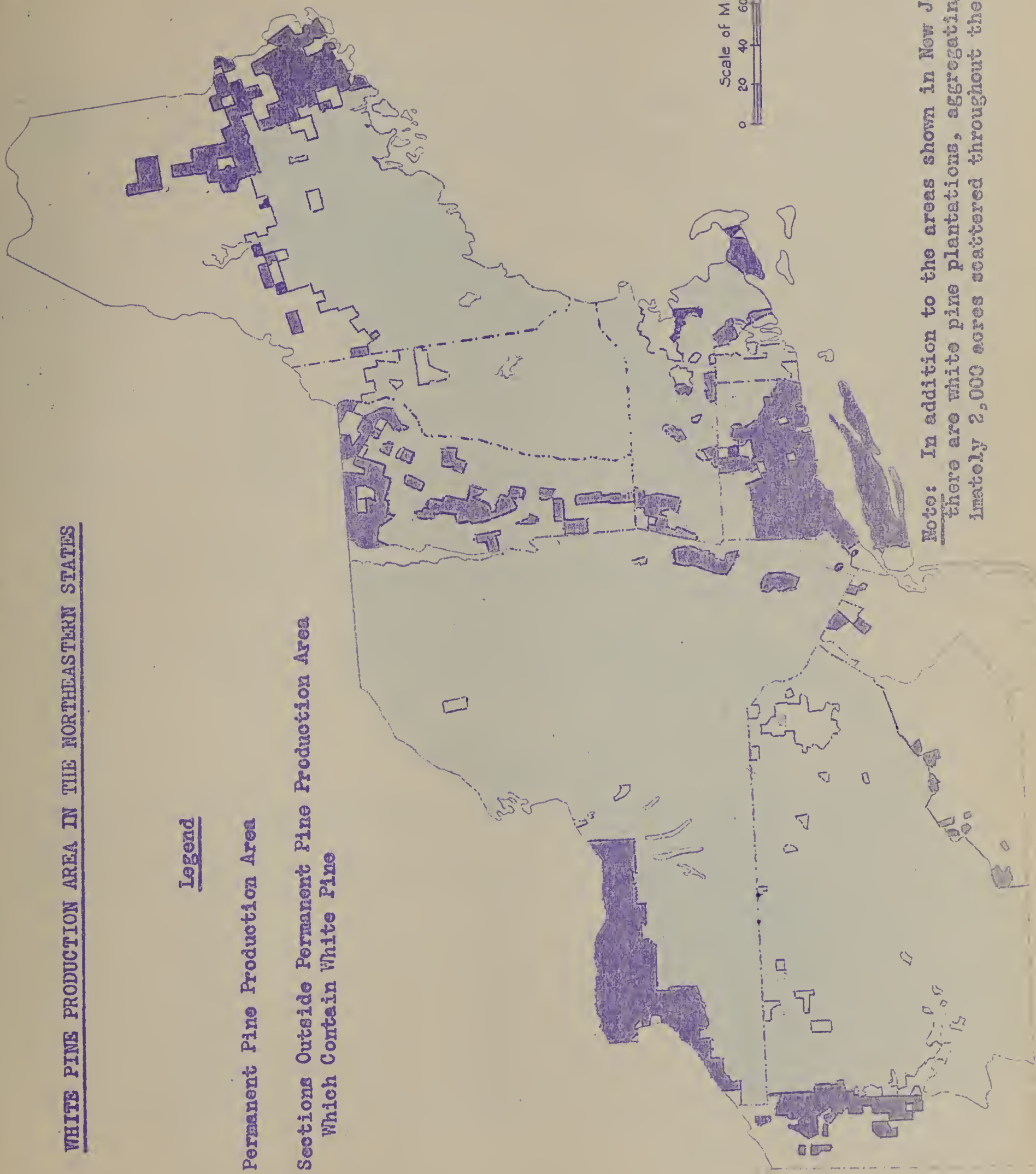
The figures on white pine acreages in Table 98 are based on pine maps where available (see Page 151) and on estimates for the remaining portions. There is, in addition, a large acreage containing a mixed growth of white pine below minimum stocking requirements for protection, namely: 50 pines per acre for trees over 6 inches D.B.H., 100 trees per acre for pines 3-6 inches D.B.H., and 300 trees per acre in the under 3 inches D.B.H. class. Generally speaking, mixed types with less than 30% white pine were excluded from the control areas. However, in New Hampshire where the Ribes eradication is conducted under town cooperation in block units, mixed types with 20 or more percent white pine were frequently included in the control areas. The acreage of white pine in the control area in Rhode Island includes thousands of acres of pine reproduction in hardwoods and brush. Although the existing pines on many of these tracts do not meet the minimum requirements as set up for the Region, the present stocking on these potential pine areas is considered of sufficient value to justify the cost of control measures, since the Ribes are few and concentrated in definite types.

WHITE PINE PRODUCTION AREA IN THE NORTHEASTERN STATES

Legend

 = Permanent Pine Production Area

 = Sections Outside Permanent Pine Production Area
Which Contain White Pine



Note: In addition to the areas shown in New Jersey, there are white pine plantations, aggregating approximately 2,000 acres scattered throughout the state.

Table 99 - Status of Ribes Eradication Work in Northeastern States

Initial Control Work

State	Reported Acreage of Initial Control Work	Acreage of Present Control Area Initially Protected	Acreage Still Needing Initial Protection			Percentage of Control Area Initially Protected		
			In Townships Comprising Permanent Pine Production Area	In Townships Outside Permanent Pine Production Area	Total	In Townships Comprising Permanent Pine Production Area	In Townships Outside Permanent Pine Production Area	Total
Maine	2,244,438	2,019,662	488,156	264,819	752,975	80.5	1.0	72.8
N.H.	3,116,516	2,914,157	271,483	0	271,483	91.5	-	91.5
Vt.	412,505	412,505	437,904	21,207	459,111	48.3	16.1	47.3
Mass.	1,948,894	1,818,222	38,760	3,145	46,905	97.9	86.6	97.5
R.I.	317,826	311,437	22,329	0	22,329	93.3	-	93.3
Conn.	403,756	403,756	26,713	73,263	99,981	92.7	46.1	80.2
N.Y.	2,082,265	1,847,135	1,021,588	56,530	1,078,148	64.0	32.8	63.1
N.J.	16,742	16,742	0	18,900	18,900	100.0	0	46.9
Penn.	434,037	398,346	655,089	106,549	760,638	47.7	2.5	34.4
Totals	10,956,979	10,141,962	2,962,027	648,443	3,610,470	77.1	21.8	74.3

*These figures are smaller than the total of yearly reported acreages of initial control work due to the elimination of many pine lots which were burned over or cut off subsequent to the initial Ribes eradication work.

The total acreage of initial work still to be done in each state was compiled from township estimates submitted by the state and district leaders during December, 1938.

Re-Eradication Work

State	Total Acreage of Re-Eradication Work Reported 1918-1938, Incl.	Percentage of Total Control Area That Has Been Re-Worked	Percentage of Control Area in Permanent Pine Production Area That Has Been Re-Worked
Maine	520,501	18.8	20.8
N.H.	734,634	23.1	23.1
Vt.	126,060	14.5	14.9
Mass.	799,609	42.9	44.3
R.I.	270,203	81.0	81.0
Conn.	282,315	56.0	76.3
N.Y.	499,913	17.1	17.6
N.J.	1,417	4.0	3.5
Penn.	148,940	12.9	14.2
Totals	3,383,592	24.3	26.1

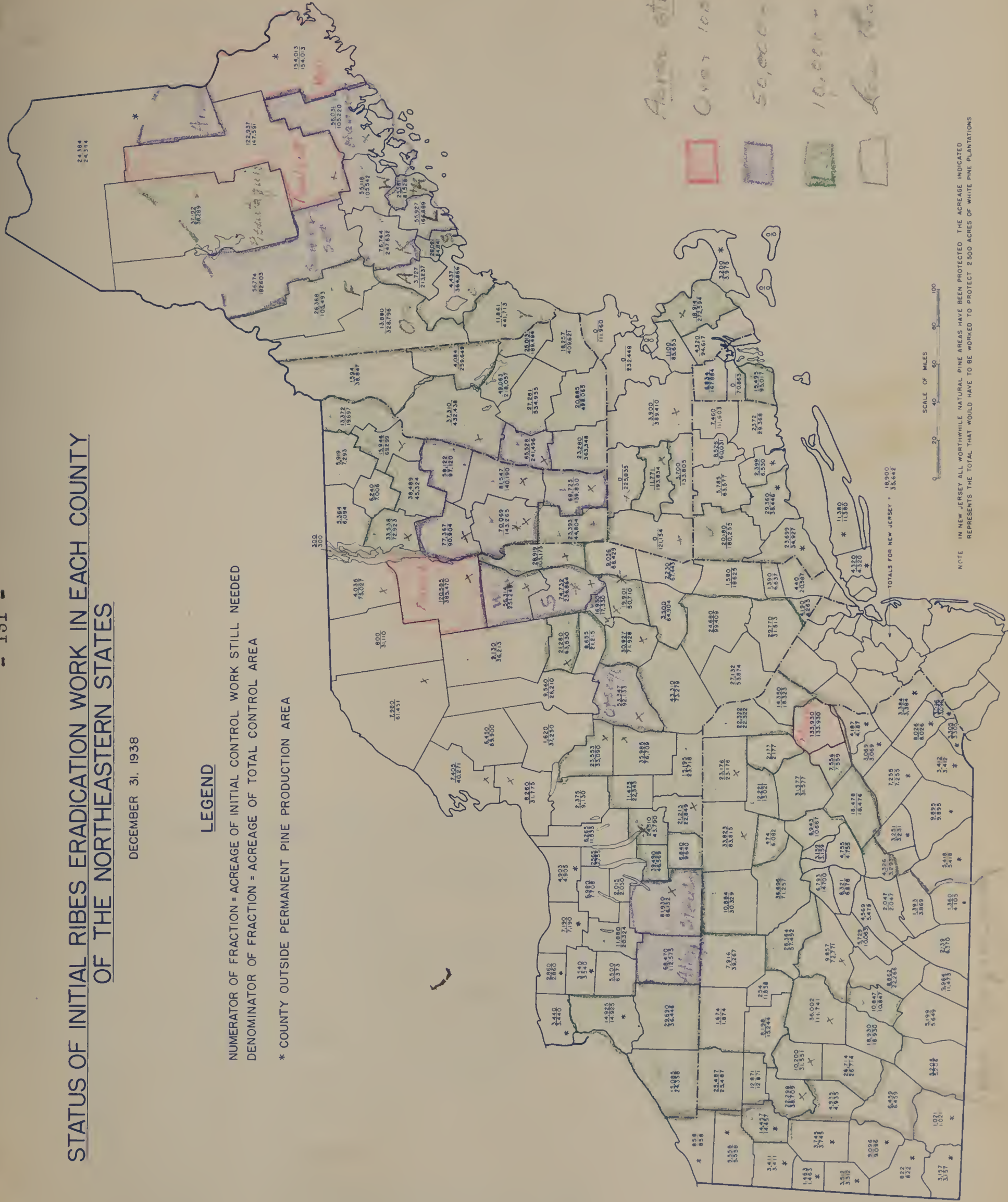
STATUS OF INITIAL RIBES ERADICATION WORK IN EACH COUNTY OF THE NORTHEASTERN STATES

DECEMBER 31, 1938

LEGEND

NUMERATOR OF FRACTION = ACREAGE OF INITIAL CONTROL WORK STILL NEEDED
DENOMINATOR OF FRACTION = ACREAGE OF TOTAL CONTROL AREA

* COUNTY OUTSIDE PERMANENT PINE PRODUCTION AREA



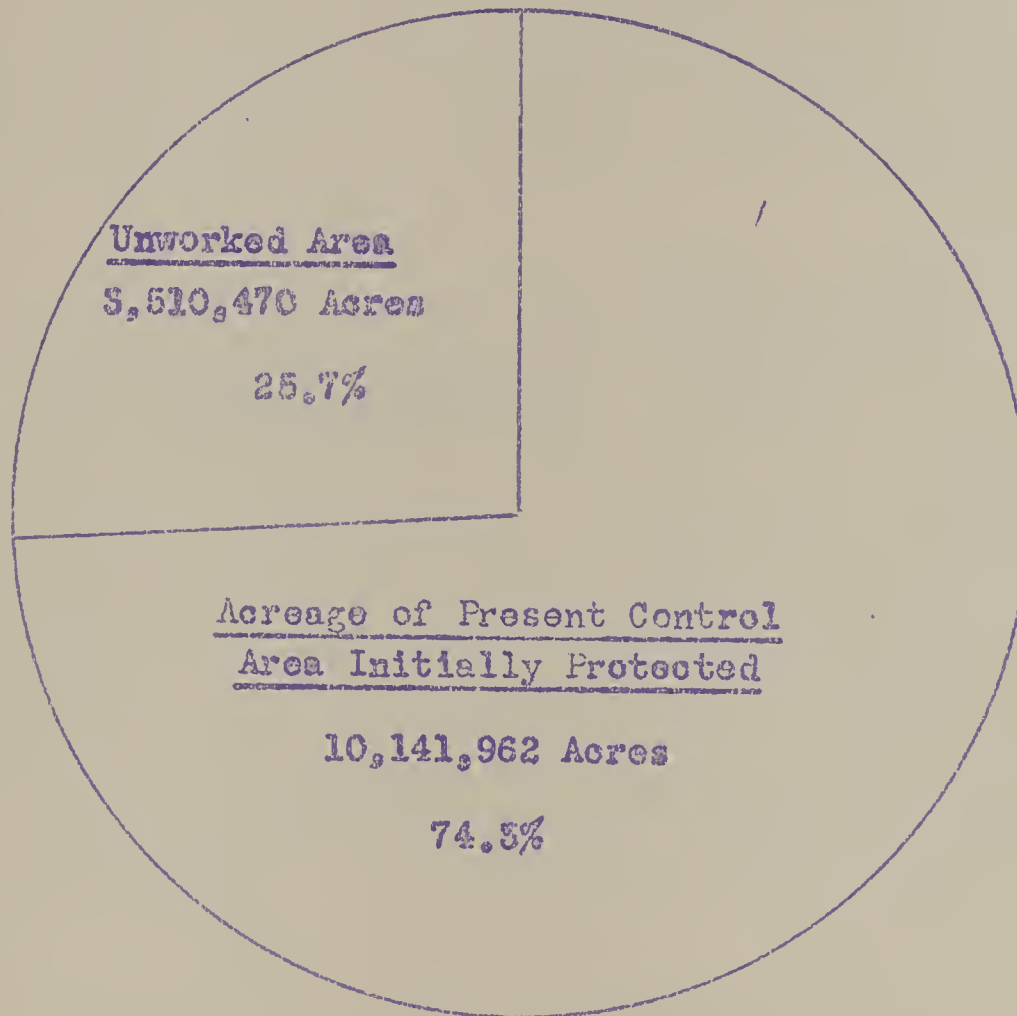
NOTE IN NEW JERSEY ALL WORTHWHILE NATURAL PINE AREAS HAVE BEEN PROTECTED THE ACREAGE INDICATED REPRESENTS THE TOTAL THAT WOULD HAVE TO BE WORKED TO PROTECT 2500 ACRES OF WHITE PINE PLANTATIONS

STATUS OF INITIAL RIBES ERADICATION WORK IN NORTHEASTERN STATES

DECEMBER 1938

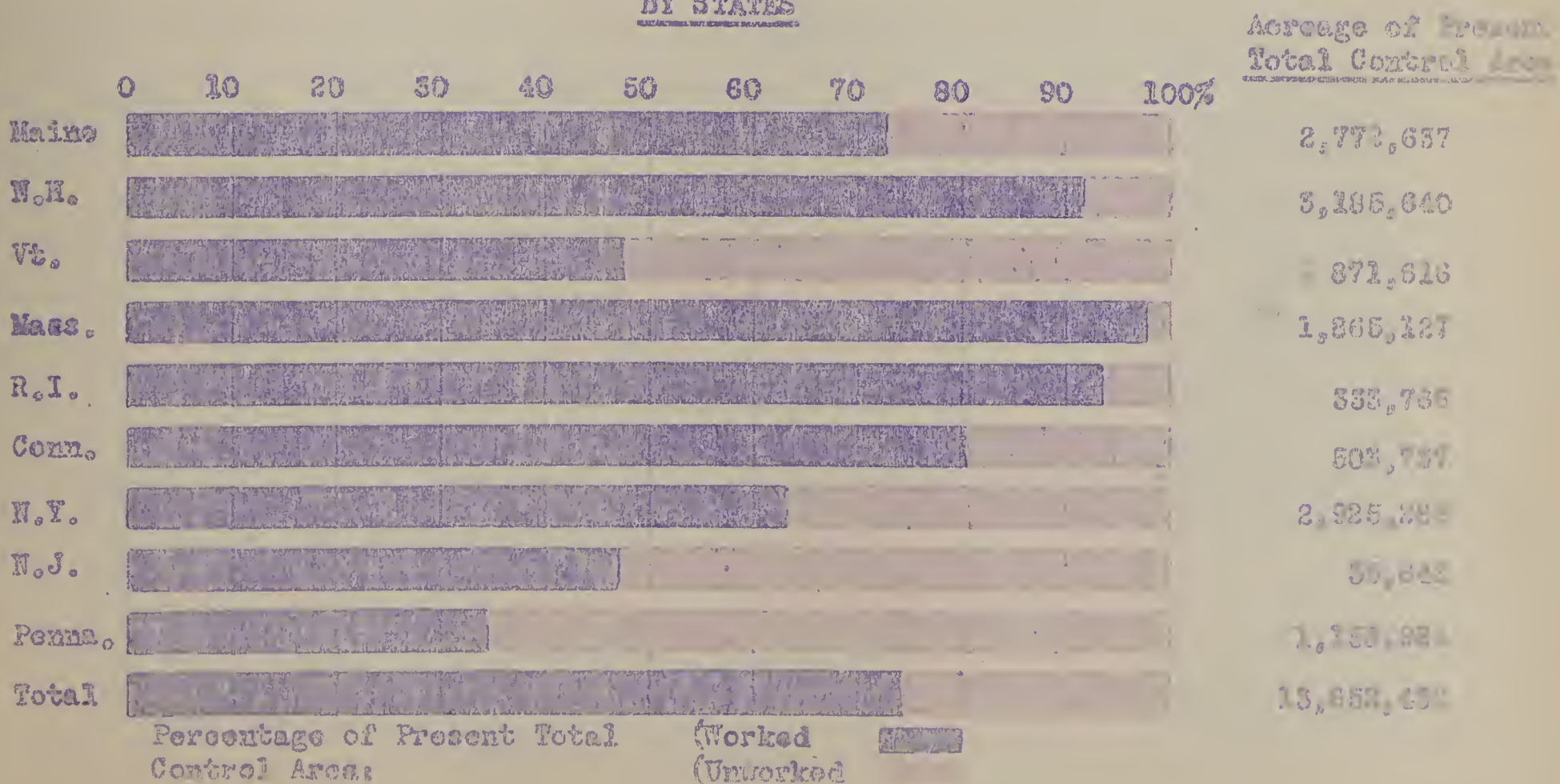
(Excludes Special Nursery Sanitation and Black Current Elimination Projects)

ALL STATES



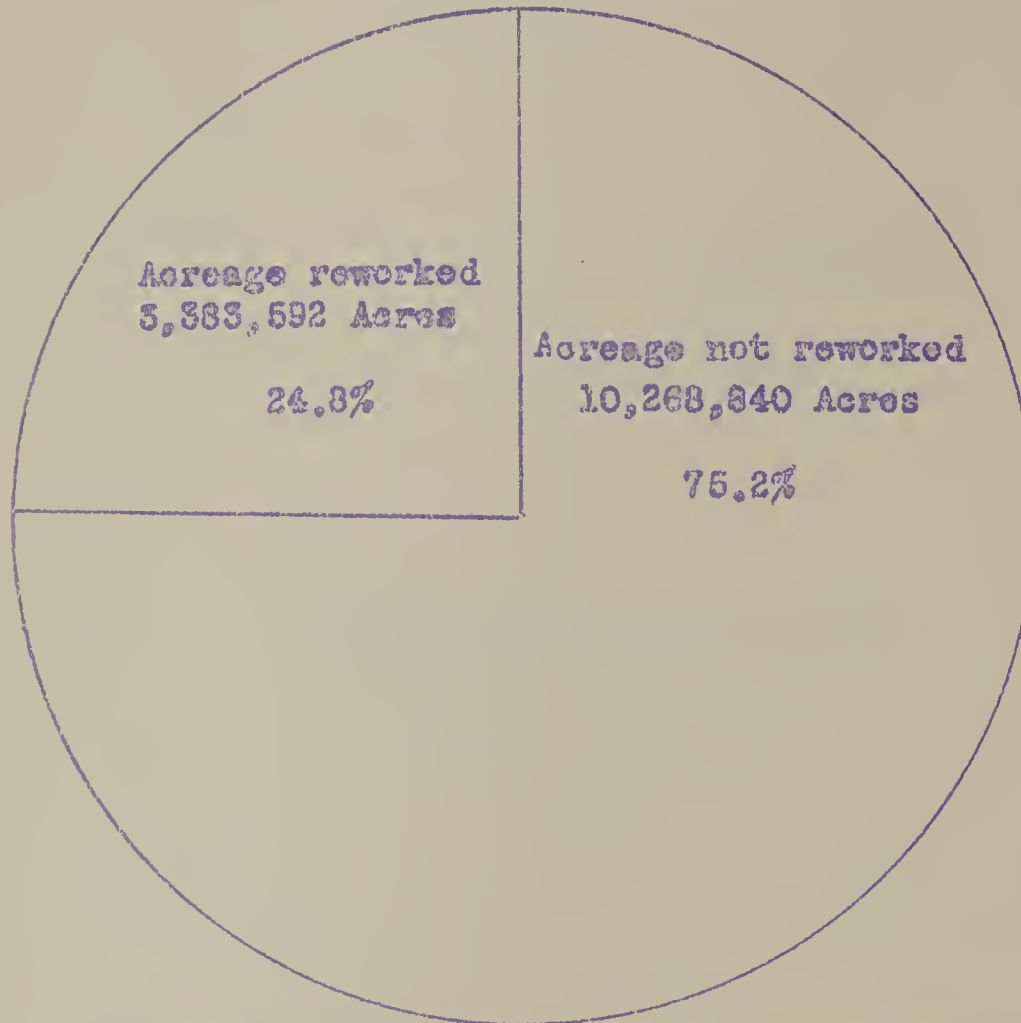
Present Total Control Area - 13,652,432 Acres

BY STATES



STATUS OF RIBES REERADICATION WORK IN NORTHEASTERN STATES, DECEMBER, 1938.
(Excludes Special Nursery Sanitation and Black Currant Elimination Projects)

ALL STATES



Present Total Control Area - 15,652,432 Acres

BY STATES

	0	10	20	30	40	50	60	70	80	90	100%	Acreage of Present Total Control Area
Maine												2,772,637
N.H.												3,235,640
Vt.												871,616
Mass.												1,865,127
R.I.												333,763
Conn.												503,737
N.Y.												2,925,283
N.J.												35,642
Penn.												1,158,984
Total												15,652,432

Percentage of Present Total
Control Area

(Reworked
(Not Reworked)

FIELD STUDIES IN NORTHEASTERN STATES TO DETERMINE
EFFECTIVENESS OF WHITE PINE BLISTER RUST CONTROL WORK

During 1934, plot and strip-line studies were made by the district blister rust control leaders to determine the effectiveness of blister rust control work by ascertaining infection conditions on white pines in protected and unprotected areas in six of the Northeastern States. The disease had existed in these tracts since 1914, and Ribes eradication in the control areas had been limited to initial work performed during the period 1923-1930, inclusive.

Similar plot studies were also made in five of the Northeastern States during the latter part of 1937. In most instances, W.P.A. laborers were used to obtain the desired pine infection data. The majority of these men had no previous experience in this type of work, and it was necessary to give them special training in the identification of blister rust infections and the method of determining the age of such cankers. The district leaders spent as much time as possible supervising these 1937 studies. Field inspections showed that, in a few cases, the W.P.A. personnel had difficulty in determining the age of the cankers, especially on suppressed pines. In such instances, the cankers would actually be older than the dates recorded. Consequently, some of the infections listed as originating subsequent to the Ribes eradication work may have developed prior to that time. Therefore the control work in the areas studied during 1937 undoubtedly was even more effective than the results indicate. The following basic requirements were established for the selection of the 1937 study plots:

- (1) Use representative areas, making no attempt to "hand-pick" the location of the plots.
- (2) Select sites containing pines chiefly under 25 feet in height, so they can be effectively examined.
- (3) Lay out plots in protected areas worked during the period 1922-1934. Do not make studies in areas examined for Ribes subsequent to 1934, since most of the infections that may have developed after that year would not be recognizable.
- (4) Select plots which contain some cankers originating prior to the application of control measures. Otherwise, there would be nothing to show the control work had been effective in checking the disease.
- (5) Locate study plots in pine areas having 600-900 foot protection zones.

The following information was recorded for each pine: height; D.B.H; dominance class; condition, with respect to blister rust infection; and the age of each blister rust canker. Each canker was classified according to the age of the wood on which the infection originated.

Pine Infection Conditions in Protected Areas

In the protected areas examined during 1934, 37 plots comprising 72.6 acres, were laid out in 26 towns in four states. Out of a total of 19,835 pines examined, 4,435, or 22.4%, were infected with 9,096 blister rust cankers. Even though the protection work had been conducted 4 to 11 years previous to 1934, only 2.2% of the total diseased trees became infected for the first time after the areas were cleared of Ribes, and only 2.2% of the total cankers originated after that time. Infection conditions in protected areas were also determined in 23 towns in two states by examining all pines under 25 feet in height on 13 miles of rod-wide strip lines. A total of 5,530, or 35% of the 15,808 pines on the strips, were infected with 7,847 cankers. Only 1.8% of these diseased pines became infected for the first time after the application of control measures, and only 2.3% of the cankers originated after protection was established.

Ninety one plots, aggregating 87½ acres, were examined in protected areas in 58 townships in five states during 1937. These plots contained 66,713 white pines, and 11,653, or 17.5% of the trees were infected with 15,567 blister rust cankers, 10.2% of which originated after the areas were examined for Ribes from 3 to 16 years prior to 1937. Only 8.7% of the total diseased pines became infected for the first time after control measures were applied.

Table 100. - Summary of Pine Infection Conditions in Protected Areas

	No. of Towns	No. of Plots	Miles Strip Line	Acreage of Plots and Strip Lines	Total No. Pines Examined	Total No. Inf. Pines	%	Number of Blister Rust Cankers			No. of Cankers Per 100 Trees Examined		
								Orig. Before Control	Orig. After Control	Total	Orig. Before Control	Orig. After Control	Total
1934	26	37	-	72.6	19,835	4,435	22.4	8,892	204	9,096	44.8	1.0	45.8
	23	-	13	26.0	15,808	5,530	35.0	7,662	185	7,847	48.6	1.1	49.6
1937	58	91	-	87.6	66,713	11,653	17.5	13,977	1,590	15,567	20.9	2.4	23.3
Totals	107	128	13	186.1	102,356	21,618	21.1	30,531	1,979	32,510	29.8	2.0	31.8

Pine Infection Conditions in Unprotected Areas

During 1934, studies were made on 45 plots, totalling 51.2 acres, in unprotected areas in 35 townships of six states. Blister rust had infected 8,760 or 49.9% of the 17,569 white pines examined. The danger of delaying control measures is clearly indicated by the fact that 69.73% of the 22,238 blister rust cankers on these unprotected areas developed during the period 1927-1934.

In the unprotected areas studied during 1937, a total of 88 plots, comprising 85½ acres, were laid out in 61 townships in five of the Northeastern States. Out of the total of 68,829 pines examined, 14,132, or 20.5%, of the trees were infected with 23,103 blister rust cankers. Over 54% of these cankers originated after 1930.

Table 101. - Summary of Pine Infection Conditions in Unprotected Areas

Year of Studies	No. Towns	No. Plots	Acreage of Plots	Total No. Pines Examined	Total No. Pines Infected	Percent Total Pines Infected	Total No. Blister Rust Cankers	No. Cankers Per 100 Trees Examined
1934	35	45	31.2	17,569	8,760	49.9	22,238	126.6
1937	61	88	85.25	69,829	14,132	20.5	23,108	33.6
Totals	96	133	116.45	86,398	22,892	26.5	45,346	52.5

Comparison of Pine Infection Conditions in Protected and Unprotected Areas

A comparison of pine infection conditions for the plots in the protected and unprotected areas studied in 1934 shows that 49.9% of the pines in the latter plots were diseased as against 22.4% in the protected areas, while the percentages for the 1937 plots were 20.5% and 17.5% respectively. The difference of only 3.0 in the percentage of pines infected in the two classes of 1937 study plots is principally due to the fact that most of the heavily infected areas in this Region have now been protected. It is extremely difficult to find suitable study plots in unworked areas in some of the districts, where the initial control work has been completed in the majority of the townships. Another factor to be considered in comparing infection conditions in the two types of areas is that 93.9% of the infections in the protected plots took place prior to the application of control - see data under heading "Effectiveness of Control."

There were 51.8 blister rust cankers per hundred trees examined on all of the 1934 and 1937 study plots in protected areas as compared with 52.5 cankers per hundred trees in the unprotected tracts. On this basis, the infection was 65.1% greater on the unworked areas. A similar comparison for the 1934 plots only shows 45.8 and 126.6 cankers per hundred trees, respectively. On these 1934 study areas, pine infection was over 176% greater on the unprotected plots.

Effectiveness of Control Work

The effectiveness of the control work in the study areas is evidenced by an analysis of the infection data to show the percentage of the total pines which became infected for the first time after control work, and the percentage of the total cankers which originated after the areas were examined for Ribes, thus:

Year of Studies	No. of Plots	Miles of Strip Line	Percentage of Diseased Pines Infected For First Time After Control Work	Percentage of Total Cankers Which Originated After Control Work
1934	37	-	2.2	2.2
1934	-	13	1.8	2.3
1937	91	-	8.7	10.2
Totals	128	13	7.2	6.1

The 1937 studies included four plots in one state, which undoubtedly did not receive adequate protection. These four areas were examined for Ribes prior to 1929 when the control work was performed by owners' labor. In some instances, the cooperators would not work adequate protection zones on the properties of adjacent owners; consequently, the pines did not receive adequate protection. By eliminating the data for these four plots, the percentage of diseased pines infected for the first time after control work was performed in the 1937 study areas is reduced to 6.0% and the percentage of the total cankers originating after control work is reduced to 7.7%.

An analysis of the infection data, by years, for the 1937 plot studies in areas cleared of Ribes during the period 1928-1934, inclusive, indicates further the effectiveness of the control work:

<u>Year of Control Work</u>	<u>No. of Plots</u>	<u>Percentage of Diseased Pines Infected For First Time After Control Work</u>	<u>Percentage of Total Cankers Originating After Control Work</u>
1928	8	13.3	14.9
1929	10	5.6	6.2
1930	14	4.1	5.0
1931	15	6.2	11.7
1932	14	7.1	7.7
1933	13	4.9	6.3
1934	8	0	0
Totals	82	6.7	8.2

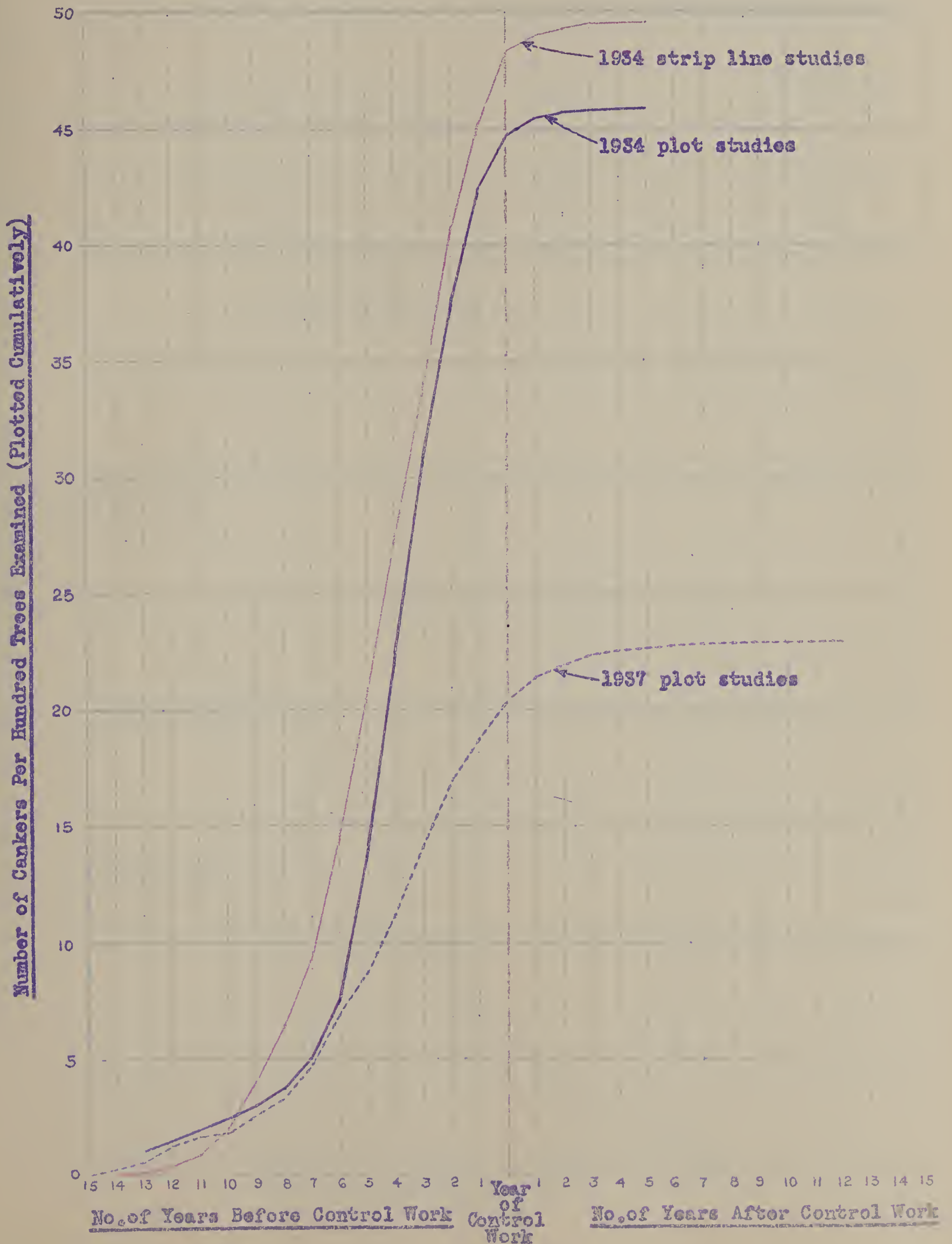
In addition to the 82 plots in the above summary, there were 9 plots laid out in areas protected before 1928. Of the 5,763 pines on these 9 plots, 1,009, or 17.5%, were infected with a total of 1,348 blister rust cankers. Nearly 32% of the total cankers on these nine plots originated subsequent to Ribes eradication work. The results of the studies in these early control areas cannot be considered representative of general conditions, as insufficient plots were studied from which to draw any definite conclusions. However, the data do indicate that re-eradication work was delayed too long in these nine areas.

The chart on Page 158 is a graphic summary of the relative number of blister rust infections accumulated per hundred trees examined in the protected areas studied during 1934 and 1937. The data were computed on this basis to secure uniformity of comparison among plots with varying numbers of trees and varying acreages. This chart shows definitely that control work checked the spread of blister rust infection. It is apparent that, based on totals, the 1934 studies were made in areas where infection reached a much higher point prior to the date of Ribes eradication than was attained in the 1937 study areas. Irrespective of the amounts of infection occurring prior to control work, there was in all cases a definite drop in new infections after that date.

The effectiveness of control work is also depicted by the chart on Page 139 which shows the actual number of infections found on both the protected and unprotected plots examined during 1934 and 1937. The numbers of infections have been accumulated, by five year periods, which smooths out some of the irregularities occurring in a similar graphic analysis, by one year intervals. Up to 1930, there is very little difference in the general trends of the lines for all of the study plots, but after that date there is a marked reduction in the number of new infections in the protected areas.

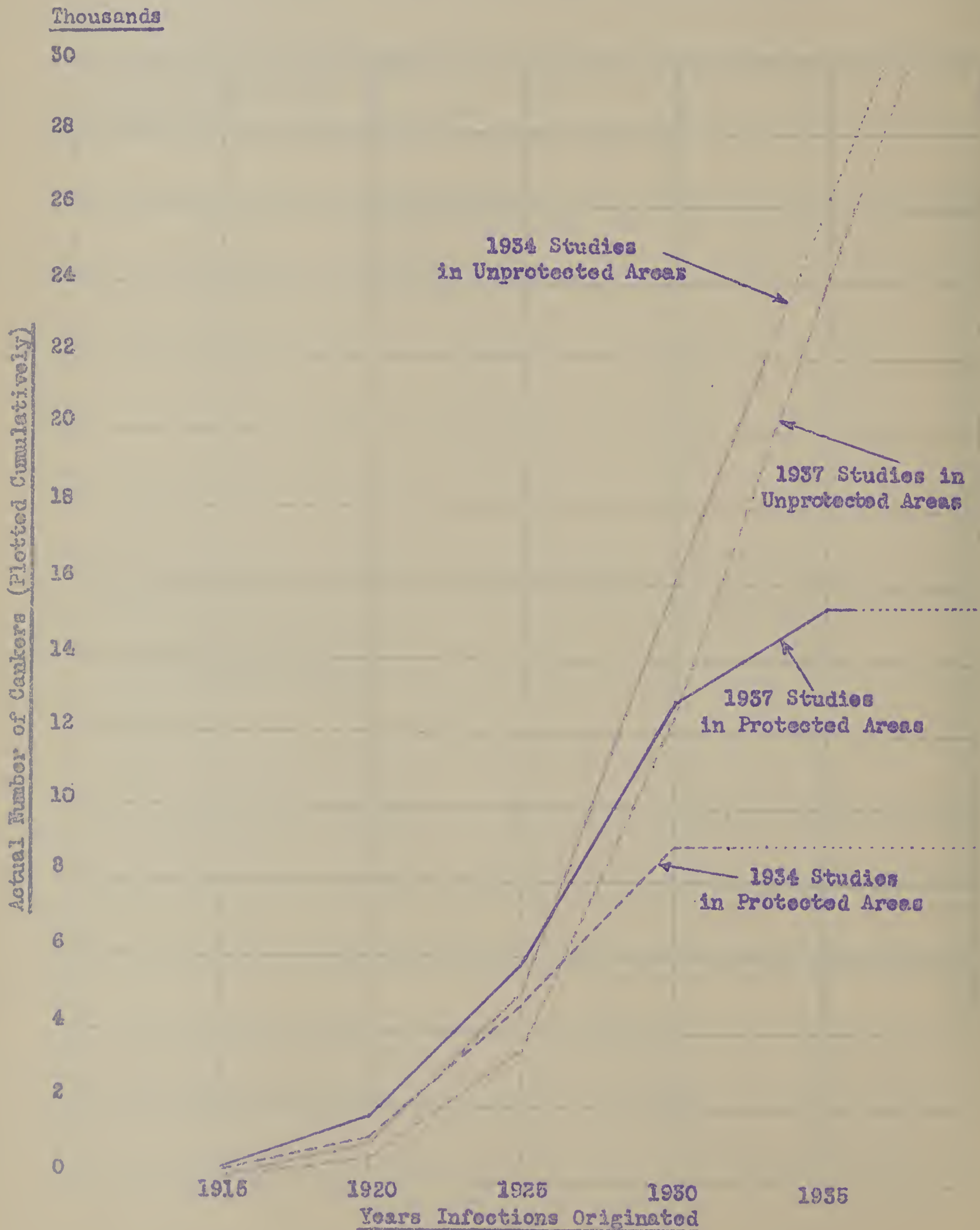
EFFECTIVENESS OF RIBES ERADICATION IN CONTROLLING BLISTER RUST INFECTION ON WHITE PINES

(Based on cankers per hundred trees (plotted cumulatively) according to the year of origin in relation to the time when control work was performed on the areas studied during 1934 and 1937 - see Table 100 for detailed information on study plots and strip lines.)



BLISTER RUST INFECTION ON WHITE PINES IN PROTECTED AND UNPROTECTED STUDY AREAS

(Based on actual number of infections according to years of origin and plotted cumulatively for 1934 and 1937 plot studies only - infections grouped by five-year periods. See Tables 100 and 101 for detailed information on study plots.)



The results of these plot and strip line studies speak for themselves. However, the conclusions may be summarized briefly, as follows:-

- (1) The studies show that ordinary Ribes eradication work, such as performed in the representative plots, has been effective in controlling the rust.
- (2) To control the disease, it is essential that the Ribes be removed from adequate protection zones.
- (3) Reworking of areas should not be delayed too long if control is to be maintained effectively. (Areas should be inspected at intervals of 3 to 5 years to ascertain if Ribes re-growth is a menace to the pines.)
- (4) Blister rust infection is rapidly increasing in unprotected areas.

By Station

- (1) Towns funds - balance of expenditures under heading "Local Cooperation" all individual funds.
- (2) Includes \$1,184.20 W.P.A. funds spent under State W.P.A. Program.
- (3) Includes \$29.54 B.E.&P.Q. funds - balance of expenditures under this heading were from B.P.I. funds.

Table 103 - Summary of Nursery Sanitation Work Under All Programs in Northeastern States During Period 1930-1938, Inclusive.

By Years

Year	Type of Erad.	Acreage Examined	Ribes Pulled		Total Man Days	Cost						Per Acre				
			Wild	Cult.		Local Coop.	State B.P.I.	BE&PQ and	P.W.A.	C.C.C.	W.P.A.	S.C.S.	Total	Cost	Ribes	Man Days
1930	Initial	4,973	110,704	182	447	528.77	905.19	-	-	-	-	-	1,433.96	.288	22.3	.09
	Re-Erad.	20,752	59,542	645	1490	568.89	4193.33	-	-	-	-	-	4,767.22	.230	2.9	.07
	Total	25,725	170,246	825	1937	1097.66	5103.52	-	-	-	-	-	6,201.18	.241	6.6	.08
1931	Initial	3,048	6,117	55	120	5.60	240.36	139.92	-	-	-	-	385.88	.127	2.0	.04
	Re-Erad.	26,776	26,126	1086	1671	117.69	4863.42	372.50	-	-	-	-	5,353.61	.200	1.0	.06
	Total	29,824	32,243	1141	1791	123.29	5103.78	512.42	-	-	-	-	5,739.49	.192	1.1	.06
1932	Initial	4,759	16,478	1222	565	50.65	1588.32	172.87	-	-	-	-	1,811.84	.381	3.5	.12
	Re-Erad.	12,903	12,543	60	1247	163.24	3828.15	5.33	-	-	-	-	3,996.72	.310	1.0	.10
	Total	17,662	29,021	1282	1812	213.89	5416.47	178.20	-	-	-	-	5,808.56	.329	1.6	.10
1933	Initial	1,574	21,642	32	130	59.40	196.95	36.80	264.55	-	-	-	557.70	.354	13.7	.03
	Re-Erad.	18,662	36,643	368	1713	331.95	4608.74	255.54	-	709.40	-	-	5,905.63	.316	2.0	.09
	Total	20,236	58,285	400	1843	391.35	4805.69	292.34	264.55	709.40	-	-	6,463.33	.319	2.9	.09
1934	Initial	2,293	48,247	144	162	217.55	7.00	-	315.34	65.28	-	-	605.17	.264	21.0	.07
	Re-Erad.	18,144	30,642	62	1904	-	2432.22	-	3066.50	796.84	-	-	6,295.56	.347	1.7	.11
	Total	20,437	78,889	206	2066	217.55	2439.22	-	3381.84	862.12	-	-	6,900.73	.338	3.9	.10
1935	Initial	148	1,608	320	27	46.90	-	-	-	-	-	-	46.90	.317	10.9	.18
	Re-Erad.	18,489	30,513	179	1269	34.75	1987.27	-	716.63	849.93	-	-	3,588.58	.194	1.7	.07
	Total	18,637	32,121	499	1296	81.65	1987.27	-	716.63	849.93	-	-	3,635.48	.195	1.7	.07
1936	Initial	195	1,538	65	102	-	77.25	-	-	-	-	228.00	305.25	1.57	7.9	.53
	Re-Erad.	13,604	13,288	155	1500	63.00	1802.06	-	-	595.92	2930.79	-	5,391.77	.396	1.0	.11
	Total	13,799	14,826	220	1602	65.00	1879.31	-	-	595.92	2930.79	228.00	5,697.02	.413	1.1	.12
1937	Initial	980	27	70	9½	1.60	-	-	-	-	46.50	-	48.10	.049	.03	.01
	Re-Erad.	17,809	12,045	70	1505½	230.90	1438.43	29.54	-	1174.51	2008.03	2.25	4,883.66	.274	0.7	.08
	Total	18,789	12,072	140	1515	232.50	1438.43	29.54	-	1174.51	2054.53	2.25	4,931.76	.262	0.6	.08
1938	Initial	215	-	3	19	-	29.00	-	-	-	-	55.30	84.30	.392	0	.09
	Re-Erad.	21,755	10,091	12	1115	55.50	1309.13	-	-	954.70	893.60	48.15	3,261.08	.150	0.5	.05
	Total	21,970	10,091	15	1134	55.50	1338.13	-	-	954.70	893.60	103.45	3,345.38	.152	.45	.051
Total	Initial	18,185	206,361	2093	1581½	910.47	3044.07	349.59	579.89	65.28	46.50	283.30	5,279.10	.290	11.3	.09
	Re-Erad.	168,894	231,433	2635	13,414½	1565.92	25,467.5	662.91	3783.13	5081.30	5832.42	50.40	43,443.83	.257	1.4	.08
	Total	187,079	437,794	4728	14,996	2476.39	29,511.82	1012.50	4363.02	5146.58	5878.92	333.70	48,722.93	.260	2.3	.08
Total cost by cooperating agencies			5.1	60.6	2.1	8.9	10.5	12.1	0.7	-	-	-	100.0	-	-	-

(1) Includes \$7.73 town funds
(2) Includes \$148.45 town funds.
(3) B.E. & P.O. funds.

Table 104 - Summary of Nursery Sanitation Work in Northeastern States
During Period 1930-1938, Inclusive - By Programs

Program	Type of Erad.	Total Acreage Examined	Ribes Pulled		Total Man Days	Local Coop.	State	BE&PQ and BPI	Cost				Total	S.C.S.	W.P.A.	C.C.C.	P.W.A.	Per Acre				
			Wild	Cult.																		
Regular Coopera- tive	Initial	16,490	178,967	1930	1271½	879.72	2,930.82	349.59	-	-	-	-	-	-	-	-	-	4160.13	.252	10.9	.08	
	Re-Erad	120,008	163,265	2407	7255	1258.42	23,224.45	633.37	-	-	-	-	-	-	-	-	-	25,116.24	.209	1.4	.06	
	Total	136,498	342,230	4337	8526½	2138.14	26,155.27	982.96	-	-	-	-	-	-	-	-	-	-	29,276.37	.214	2.5	.08
P.W.A.	Initial	415	25,597	3	147	30.75	7.00	-	579.89	-	-	-	-	-	-	-	-	-	617.64	1.49	61.7	.35
	Re-Erad.	15,422	14,285	96	1356	-	1,597.41	-	3783.13	-	-	-	-	-	-	-	-	-	5,380.54	.349	0.9	.09
	Total	15,837	39,882	99	1503	30.75	1,604.41	-	4363.02	-	-	-	-	-	-	-	-	-	5,998.18	.579	2.5	.09
C.C.C.	Initial	280	232	47	33	-	-	-	-	65.28	-	-	-	-	-	-	-	-	65.28	.233	0.8	.12
	Re-Erad.	9,717	43,916	14	3216	-	736.30	-	-	5081.30	-	-	-	-	-	-	-	-	5,817.60	.599	4.5	.33
	Total	9,997	44,148	61	3249	-	736.30	-	-	5146.58	-	-	-	-	-	-	-	-	5,882.88	.588	4.4	.32
Federal W.P.A.	Initial	590	27	45	9	-	-	-	-	-	-	-	-	-	-	-	-	-	46.50	.079	0.04	.01
	Re-Erad.	16,161	9,189	118	1,311	307.50	805.19	-	-	-	-	-	-	-	-	-	-	-	4648.22	.627	0.6	.05
	Total	16,751	9,216	163	1,320	307.50	805.19	-	-	-	-	-	-	-	-	-	-	-	4694.72	.630	0.6	.03
State W.P.A.	Initial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Re-Erad.	1,798	335	-	243	-	-	-	-	-	-	-	-	-	-	-	-	-	1184.20	.659	0.2	.14
	Total	1,798	335	-	243	-	-	-	-	-	-	-	-	-	-	-	-	-	1184.20	.659	0.2	.12
S.C.S.	Initial	410	1,538	68	121	-	106.26	-	-	-	-	-	-	-	-	-	-	-	283.30	.950	3.3	.50
	Re-Erad.	5,788	445	-	33½	-	104.40	29.54*	-	-	-	-	-	-	-	-	-	-	50.40	.032	0.08	.01
	Total	6,198	1,983	68	154½	-	210.65	29.54*	-	-	-	-	-	-	-	-	-	-	333.70	.093	0.5	.02
Totals	Initial	18,185	206,361	2093	1581½	910.47	3044.07	349.59	579.89	65.28	46.50	283.30	5,279.10	.290	11.3	.09	-	-	5,279.10	.290	11.3	.09
	Re-Erad.	168,894	231,433	2635	13,414½	1565.92	26,467.75	662.91	3783.13	5081.30	5832.42	50.40	43,443.83	.257	1.4	.08	-	-	43,443.83	.257	1.4	.08
	Total	187,079	437,794	4728	14,996	2476.39	29,511.82	1012.50	4363.02	5146.58	5878.92	333.70	48,722.93	.260	2.3	.08	-	-	48,722.93	.260	2.3	.08
% of total cost by cooperating agencies						5.1	60.6	2.1	8.9	10.5	12.1	0.7	100.0	-	-	-	-	-	-	-	-	-

* B.E. and P.Q. funds.

Table 105- Status of Nursery Sanitation Work in Northeastern States
December, 1938.

State	Nurseries Where Protection Established and Being Maintained				Maximum Acreage of Control Areas	No. Nurseries Protected During 1938	No. White Pines Existing During 1938 in Nurseries Protected That Year
	Number						
	Federal	State	Private	Total			
Maine	-	1	1	2	409	1	746,000
N.H.	-	1	2	3	914	1	1,500,000
Vt.	-	1	-	1	700	-	-
Mass.	-	4	5	9	3,825	4	560,650
R.I.	-	-	5	5	2,273	5	3,298
Conn.	-	2	10	12	3,966	11	891,375
N.Y.	3	3	1	7	10,577	5	17,200,000
N.J.	1	1	-	2	795	-	-
Penna.	1	4	4	9	4,136	10*	5,373,000
Totals	5	17	28	50	27,595	37	26,264,323

* One of the nurseries worked during 1938 will not continue to maintain sanitation zone.

Twenty-eight other nurseries in the Northeastern States established zones, but abandoned them for various reasons.

List of Nurseries Maintaining Sanitation Zones
in Northeastern States

Maine

Western Maine Nursery - Fryeburg, Maine
 State Nursery - Orono, Maine

New Hampshire

Western Maine Nursery - Conway, N. H.
 Keene Forestry Associates - Swanzey, N. H.
 State Nursery - Boscowen, N. H.

Vermont

State Nursery - Essex Junction, Vt.

Massachusetts

Massachusetts Dept. of Conservation Nursery - Amherst, Mass.
 Massachusetts Dept. of Conservation Nursery - Bridgewater, Mass.
 Massachusetts Dept. of Conservation Nursery - Clinton, Mass.
 Massachusetts Dept. of Conservation Nursery - Erving, Mass.
 Winchendon Forest Nursery - Winchendon, Mass.
 Franklin Forestry Company - Shelburne Falls, Mass.
 Kelsey Highlands Nursery - Boxford, Mass.
 Little Tree Farms Nursery - Framingham, Mass.
 Wyman Nursery - Framingham, Mass.

Rhode Island

Newport Nursery - Middleton, R. I.
 Rhode Island Nursery - Middleton, R. I.
 Greenwood Nursery - North Kingston, R. I.
 Red Oaks Nursery - Scituate, R. I.
 Greateon Nursery - Providence, R. I.

List of Nurseries Maintaining Sanitation Zones
in Northeastern States (Continued)

Connecticut

Towpath Nursery - West Hartford, Conn.
Northeastern Forestry Company, Cheshire, Conn.
A. N. Pierson Inc. - Cromwell, Conn.
Elfgren Nursery - East Killingly, Conn.
Verkades Nursery - Waterford, Conn.
Bristol Nursery - Bristol, Conn.
Farmington Valley Nursery - Avon, Conn.
Barnes Brothers Nursery - Yalesville, Conn.
Southport Nursery - Southport, Conn.
Stephen S. Hoyt Nurseries - New Canaan, Conn.
State Nursery - Barkhamsted, Conn.
State Nursery - Tolland, Conn.

New York

State Nursery - Saratoga, N. Y.
State Nursery - Lowville, N. Y.
State Nursery - Painted Post, N. Y.*
State Nursery - Horseheads, N. Y.*
State Nursery - Tully, N. Y.*
New York State College of Forestry Nursery - Syracuse, N.Y.
Jackson - Perkins Nursery - Newark, N. Y.

* Leased by Soil Conservation Service

New Jersey

State Nursery - Washington Crossing, N. J.
S.C.S. Nursery - New Brunswick, N. J.

Pennsylvania

Clearfield State Nursery - Clearfield, Penna.
Greenwood State Nursery - Petersburg, Penna.
Mt. Alto State Nursery - Mt. Alto, Penna.
Rockview State Nursery - Pleasant Gap, Penna.
S.C.S. Nursery - Mt. Eagle, Penna.
Wilmore Realty Co. Nursery - Windber, Penna.
Andorra Nursery - Chester Hill, Penna.
Fairview Nursery - Fairview, Penna.
Doyle Nursery - Seven Stars, Penna.

Table 106 - Special Ribes Nigrum Elimination Work Conducted Under All Programs in Northeastern States During Period 1918-1938, Inclusive

By Programs

Program		Regular	P.W.A.	W.P.A.	C.W.A.	E.R.A.	Totals
No. Properties Inspected		1,082,802	6,157	84,007	195,750	240,335	1,609,051
No. Patches Located		14,226	39	610	5,404	25,858	46,137
No. Ribes Pulled	Nigrum	85,618	7,486	2,032	-	7,110	102,246
	Other Cult.	20,550	-	413	-	23,701	44,664
	Total	106,168	7,486	2,445	-	30,811	146,910
Total Man Days		14,150	375	553	1,850	11,675	28,603
Cost	Individuals	2,351.80	777.00	246.10	-	-	3,374.90
	Towns	-	-	-	-	901.00	901.00
	State	59,541.69	52.25	-	-	601.66	60,195.60
	B.P.I.	4,422.95	-	-	-	-	4,422.95
	P.W.A.	1,386.06	581.54	-	348.24	654.55	2,970.39
	C.C.C.	-	-	-	-	218.40	218.40
	W.P.A.	-	-	2764.95	-	-	2,764.95
	C.W.A.	-	-	-	8626.21	-	8,626.21
	E.R.A.	-	-	-	-	59,568.50	59,568.50
	Total	67,702.50	1410.79	3011.05	8974.45	61,944.11	143,042.90
% of Total		47.3	1.0	2.1	6.3	43.3	100.0

C.W.A. project consisted of location work only.

Table 107 - Special Ribes Nigrum Elimination Work Conducted Under All Programs
In Northeastern States, 1918-1938, Inclusive.

By States

State		Mass.	R.I.	Conn.	N. Y.	Totals
No. Properties Inspected		657,170	110,137	318,344	523,400	1,609,051
No. Patches Located		6,423	1,917	32,695(2)	5,102	46,137
No. Ribes Pulled	Nigrum	41,633(1)	16,219	7,464	36,930	102,246
	Other Cult.	413	1,093	42,397	761	44,664
	Total	42,046	17,312	49,861	37,691	146,910
Total Man Days		6,922	1,929	14,610	5,142	28,603
Cost	Indiv.	3,374.90	-	-	-	3,374.90
	Towns	-	-	901.00	-	901.00
	State	20,628.69	9,178.55	3,110.99	27,277.37	60,195.60
	B.P.I.	100.00	675.53	3,647.42	-	4,422.95
	P.W.A.	550.04	473.80	1,915.05	31.50	2,970.39
	C.C.C.	-	-	218.40	-	218.40
	W.P.A.	2,764.95	-	-	-	2,764.95
	C.W.A.	2,688.11	-	5,938.10	-	8,626.21
	E.R.A.	-	-	59,568.50	-	59,568.50
	Total	30,103.69	10,327.88	75,299.46	27,308.87	143,042.90
% of Total		21.1	7.2	52.6	19.1	100.0

(1) Includes 556 bushes pulled in connection with special black currant elimination project around nurseries in 1925 and 1926 at a cost of \$367.89 to the state.

(2) The survey in Connecticut included all cultivated Ribes. It is estimated that the number of black currant patches in that state did not exceed 1,500.

Table 108 - Status of Ribes Nigrum Elimination Work in Northeastern States
December 31, 1938.

State	Years Work Performed	Total Number Townships In State	No. Townships Where Black Currant Elimination Work	
			Completed	Partially Completed
Mass.	1930-1938, Incl.	355	346*	-
R.I.	1929-1933, Incl.	39	39	-
Conn.	1930-1935, Incl.	169	169	-
N.Y.	1928-1936, Incl.	998	225	50
Totals	-	1,559	779	50

*Nine additional townships on the islands adjacent to the mainland will not be worked.

In conjunction with the regular control activities in the other states, such bushes have been eradicated in the worked portions of the control areas. Few Ribes nigrum have been found in these latter states.

Table 109 - Blister Rust Canker Elimination Work Under All Programs
in Northeastern States, 1918-1938, Inclusive.

By States

State		Maine	N.H.	Vt.	Mass.	N.Y.	Penna.	Totals
Period work performed		1932-38	1937	1935-38	1933-38	1935-38	1934-38	1932-38
Est. No. pines examined		154,678	28,581	200,061	4,737,292	1,348,464	778,970	7,248,046
No. fatally inf. pines cut down		11,082	5,731	38,040	27,888	144,258	32,482	259,481
No. pines from which cankers removed		21,110	638	18,331	15,892	176,259	109,501	341,731
No. cankers removed	Branch	45,164	711	21,121	21,024	234,037	537,405	859,462
	Stem	4,501	-	227	-	690	1,753	7,171
Total man days		2,793	219	2,165	7,624	10,258	6,489	29,548
Cost	Individuals	2,048.64	-	291.18	-	240.00	-	2,579.82
	Towns	-	-	405.00	1,237.00	-	-	1,642.00
	State	31.65	-	20.50	67.98	1,301.82	-	1,421.95
	Park Service	321.04	-	-	-	-	-	321.04
	C.C.C.	3,646.57	-	-	-	-	8,203.09	11,849.66
	W.P.A.	-	779.37	6,176.91	7,724.45	40,280.33	8,075.99	63,037.05
	C.W.A.	-	-	-	24,255.74	-	-	24,255.74
	Total	6,047.90	779.37	6,893.59	33,285.17	41,822.15	16,279.08	105,107.26
% of Total		5.7	0.7	6.6	31.7	39.8	15.5	100.0

Table 110- Blister Rust Canker Elimination Work Under All Programs
in Northeastern States, 1918-1938, Inclusive.

By Programs

Program		Regular	C.C.C.	W.P.A.	C.W.A.	Total
Period work performed		1932-1938	1933-1938	1935-1938	1933-1934	1932-1938
Est. No. pines examined		106,509	624,879	1,868,658	4,648,000	7,248,046
No. fatally inf. pines cut down		9,065	31,204	201,909	17,303	259,481
No. pines from which cankers removed		13,638	84,638	230,671	12,784	341,731
No. cankers removed	Branch	20,921	484,887	336,143	17,511	859,462
	Stem	1,880	2,702	2,589	-	7,171
Tot. 1 man days		810	6,639	16,690	5,409	29,548
Cost	Individuals	2,339.82	-	240.00	-	2,579.82
	Towns	-	-	1,642.00	-	1,642.00
	State	31.65	-	1,390.30	-	1,421.95
	Park Service	321.04	-	-	-	321.04
	C.C.C.	-	11,849.66	-	-	11,849.66
	W.P.A.	-	-	63,037.05	-	63,037.05
	C.W.A.	-	-	-	24,255.74	24,255.74
	Total	2,692.51	11,849.66	66,309.35	24,255.74	105,107.26
% of Total		2.6	11.3	63.1	23.0	100.0

Table 111 - Pine and Control Area Mapping Conducted Under All Programs
In Northeastern States During Period 1933-1938, Inclusive

By States

State	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Man Days	Towns and Counties	State	Cost					
							C.C.C.	P.W.A.	W.P.A.	E.R.A. & C.W.A.	B.E. & P.Q.	Total
Maine	1,805,566	3,812,421	1,720	25,701	-	3,074.42	16,956.86	6,538.14	89,919.82	-	17.60	116,506.84
N.H.	1,013,093	172,522	-	26,024	675.35	1,425.14	11,168.98	9,443.25	88,059.86	-	1.25	110,773.93
Vt.	1,216,065	2,289,854	730	14,943	984.09	1,214.87	4,800.57	1,946.18	49,790.04	-	-	58,735.76
Mass.	609,538	738,185	805	12,386	2108.38	818.25	-	2,898.14	49,120.98	3,112.25	41.75	58,099.75
R.I.	225,660	-	-	2,264	-	820.25	7,675.26	2,009.28	3,443.36	-	-	13,948.15
Conn.	559,518	2,611,319	1,616½	17,063	1128.20	717.13	827.60	568.10	63,577.35	22,211.70	420.29	89,450.37
N.Y.	2,479,440	883,893	2,399	25,501	-	9,794.41	2,388.49	14,559.60	95,939.82	-	25.11	122,707.45
Penns.	564,354	-	4,742	35,177	-	-	92,669.83	1,266.87	43,657.45	-	4.00	137,598.15
Totals	8,473,234	10,508,194	12,012½	159,059	4896.02	17,864.47	136,487.59	39,229.56	483,608.78	25,323.95	510.00	707,820.37

(1) Includes \$51,207.63 W.P.A. funds spent on special state project.

By Programs

Programs	Acreage Mapped	Acreage Examined But Not Mapped	Miles Boundary Lines Painted	Man Days	Towns and Counties	State	C.C.C.	Cost				
								P.W.A.	W.P.A.	E.R.A. & C.W.A.	B.E. & P.Q.	Total
Regular	221,172	113,725	-	1,412	-	6,656.98	-	-	-	-	-	6,656.98
C.C.C.	947,216	364,002	1,956	35,112	-	189.59	136,487.59	-	-	-	-	136,677.18
P.W.A.	744,663	942,528	227	6,915	-	1,025.28	-	39,229.56	-	-	-	40,254.84
Federal												
W.P.A.	6,101,071	6,799,531	8,497	101,308	3,942.82	9,930.19	-	-	432,301.15	-	510.00	446,684.16
E.R.A.	213,971	2,139,370	-	4,205	-	-	-	-	-	22,211.70	-	22,211.70
C.W.A.	45,761	34,138	-	592	-	-	-	-	-	3,112.25	-	3,112.25
State												
W.P.A.	199,380	114,900	1,332.1	9,515	953.20	62.43	-	-	51,207.63	-	-	52,223.26
Totals	8,473,234	10,508,194	12,012.2	159,059	4896.02	17,664.47	136,487.59	39,229.56	483,608.78	25,323.95	510.00	707,820.37

Table 112. - Status of Pine and Control Area Mapping in Northeastern States





April 30, 1939

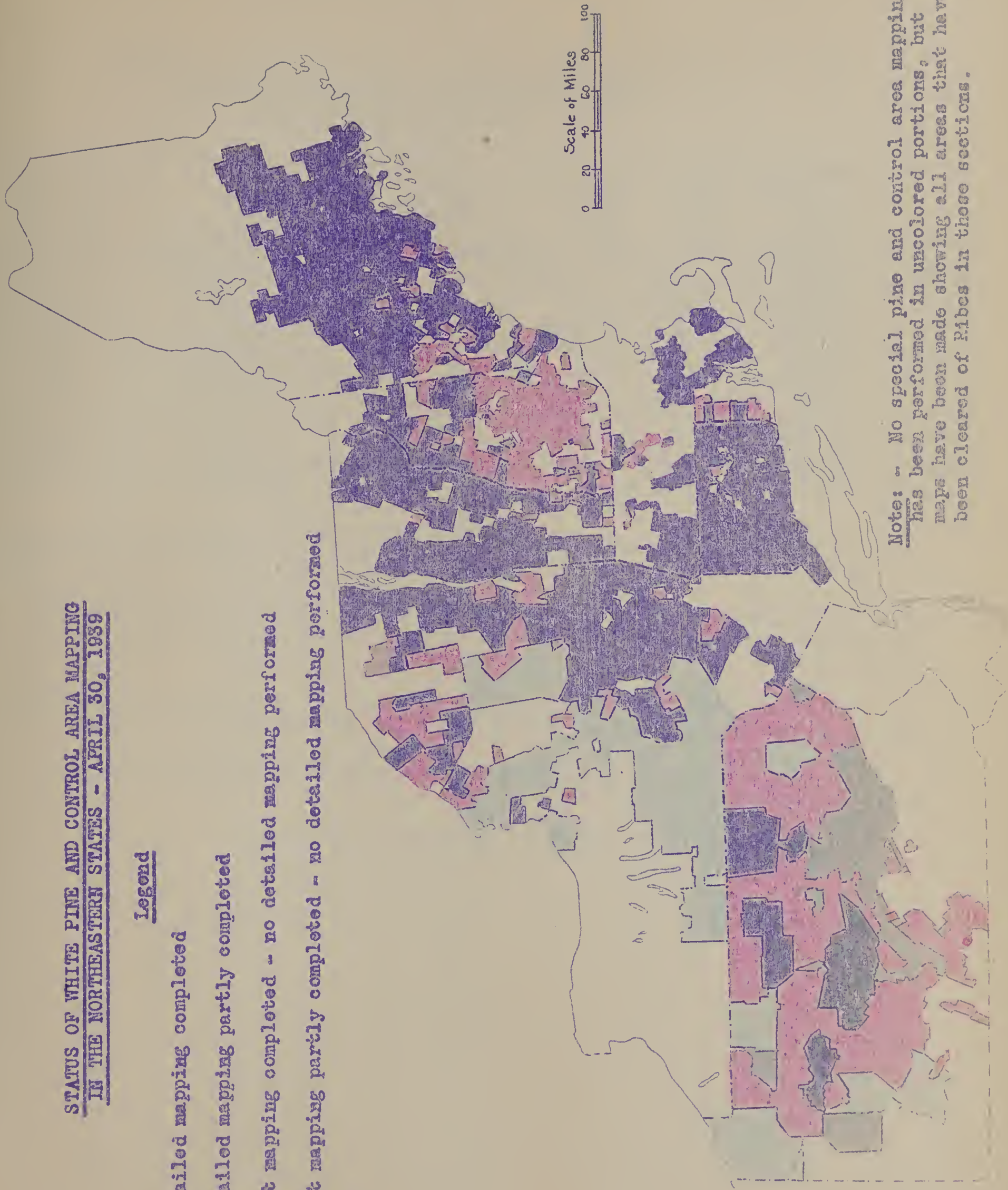
State	No. Townships		Status of Mapping in Townships Within Permanent Pine Production Area						Mapping Performed in Townships Outside Permanent Pine Production Area					
	Within Permanent Pine Production Area	Outside Permanent Pine Production Area	Detailed Mapping						Spot Mapping Only		Detailed Mapping		Spot Mapping Only	
			Completed No.	%	Partly Completed No.	%	No Work Done No.	%	Completed	Partly Completed	Completed	Partly Completed		
Maine	365	556	251	68.8	24	6.6	90	24.6	-	-	16	-	-	-
N.H.	225	33	49	21.8	104	46.2	72	32.0	-	-	-	-	-	-
Vt.	148	100	121	81.8	4	2.7	23	15.5	-	-	46	1	-	-
Mass.	239	116	81	33.9	6	2.5	152	63.6	-	-	23	-	-	-
R.I.	15	24	5	33.3	6	40.0	4	26.7	-	-	-	-	-	-
Conn.	43	126	42	97.7	0	-	1	2.3	-	-	115	1	-	-
N.Y.	838	158	203	24.2	51	6.1	584	69.7	343	-	4	3	25	-
Penna.	919	661	132	14.4	408	44.4	379	41.2	88	183	-	26	69	33
Totals	2792	1774	884	31.7	603	21.6	1305	46.7	431	183	204	31	94	33

It is questionable whether the remaining townships outside the permanent pine production area, especially in Maine and Pennsylvania, should be mapped due to the inaccessibility of most of the areas in Maine, and the scattered distribution and small acreage of the white pine units in Pennsylvania.

STATUS OF WHITE PINE AND CONTROL AREA MAPPING
IN THE NORTHEASTERN STATES - APRIL 30, 1939

Legend

-  = Detailed mapping completed
-  = Detailed mapping partly completed
-  = Spot mapping completed - no detailed mapping performed
-  = Spot mapping partly completed - no detailed mapping performed



Note: - No special pine and control area mapping has been performed in uncolored portions, but maps have been made showing all areas that have been cleared of Pines in those sections.

Table 113 - State Compensation Paid For Cultivated Ribes Destroyed
Under All Programs in Northeastern States
1918-1938, Inclusive.

State	Total No. Cultivated Ribes Destroyed	No. Bushes Paid For	% Bushes Paid For	No. Persons Paid Compensation	Amount Paid in Reimbursement	Ave. Amount Paid Per Bush
Maine	147,649	-	-	-	-	-
N.H.	153,008	2,008	1.3	63	550.60	.274
Vt.	16,320	1,646	10.1	133	792.91	.482
Mass.	317,983	42,074	13.2	673	15,020.15	.357
R.I.	41,151	1,410	3.4	58	509.79	.362
Conn.	88,879	175	0.2	16	103.60	.591
N.Y.	181,303	16,241	10.1	1,150	5,573.44	.343
N.J.	1,842	-	-	-	-	-
Penna.	45,326	336	0.7	64	153.00	.456
Totals	973,456	63,890	6.6	2,147	22,703.39	.355

The Vermont data include \$86.25 compensation paid by individual cooperators in 1926 and 1933 to ten owners of cultivated Ribes for the removal of 181 bushes.

The Massachusetts data include \$6,655.05 paid in 1918 to 253 persons for 16,617 bushes destroyed in 1917 and 1918, mostly in 1917. It is impossible to separate the 1917 data.

The Connecticut data include \$76.25 paid in 1930 by individual cooperators (nurserymen) to 12 owners of cultivated Ribes for the removal of 114 bushes.

The Pennsylvania data represent payments made by individual cooperators (nurserymen) during 1936 and 1937.

No federal money has been paid for Ribes compensation.

Table 114. Total Cost of All Cooperative Blister Rust Control Activities, By Projects, in The Northeastern States During Period 1918-1938, Inclusive.

State	Supervision And BRC Agent Activities	Ribes Eradication	Eradication Assistants and Checkers	Black Currant Elimination	Nursery Sanitation	Ribes Compen- sation	Blister Rust Canker Elimination	Pre- Erad. Surveys	Field Data and Misc.	Totals
Me.	339,256.60	876,011.64	98,130.09	-	10,954.50	-	6,047.90	116,506.84	27,158.51	1,474,066.08
N.H.	510,646.69	1,108,736.75	91,202.24	-	915.11	550.60	779.37	110,773.93	60,319.57	1,883,924.20
Vt.	180,962.17	379,878.17	31,578.05	-	1,284.18	792.91	6,393.59	58,735.75	33,593.51	693,718.73
Mass.	368,905.46	602,542.45	18,729.87	30,106.69	5,454.58	15,020.15	33,285.17	58,099.75	52,152.08	1,184,293.20
P.I.	57,078.75	143,396.61	24,523.35	10,327.88	1,826.74	509.79	-	13,948.15	9,305.00	260,916.27
Conn.	138,717.37	296,215.28	56,245.81	75,299.46	3,643.03	103.50	-	89,450.37	111,645.30	776,320.12
N.Y.	565,132.74	2,068,559.34	309,727.43	27,308.87	20,285.20	5,573.44	44,535.31	122,707.43	304,618.10	3,468,447.56
N.J.	22,897.12	6,915.69	1,952.88	-	685.90	-	-	-	4,559.08	37,010.57
Penn.	129,764.76	789,614.25	145,018.39	-	6,912.90	153.00	16,279.08	137,598.15	20,858.13	1,248,198.65
Total	2,313,361.66	6,271,870.18	777,108.11	143,042.90	58,962.14	22,703.39	107,820.42	707,820.37	624,209.28	11,026,898.41
% Total	21.0	56.9	7.0	1.3	0.5	0.2	1.0	6.4	5.7	100.0

(1) Includes \$9,500.00 (charge of \$500.00 per year) for nursery inspection work from 1918-1936, inclusive.

(2) Includes \$514.35 for special nursery inspection work during 1933-1934.

(3) Includes \$224.36 for special nursery inspection work during 1932.

Table 115 - Total Cost of Administrative Blister Rust Control Activities
in The Northeast During The Period 1918-1938, Inclusive.

		State	Maine	N.H.	Vt.	Mass.	R.I.	Conn.	N.Y.	N.J.	Penna.	All States
State Funds		State B.R. Approp.	116,303.82	269,148.18	56,822.87	200,810.68	59,649.48	132,784.50	1,116,535.48	16,184.80	103,087.90	2,111,311.57
		Other State Approp.	11,236.40	20,991.97	5,155.60	1,155.60	2,013.83	1,127.82	39,764.02	643.35	377.11	129,318.10
		Towns	110,990.01	402,073.31	16,133.91	11,922.57	-	18,832.89	-	-	-	562,532.12
		Individuals	84,781.71	47,804.51	12,177.80	2,637.35	581.36	9,201.54	171,355.32	-	2,180.23	486,655.62
		Counties	-	1,654.14	-	-	-	-	17,958.89	-	-	19,613.03
		Total State Funds	323,311.94	741,610.11	147,165.18	420,526.20	62,244.67	161,946.75	1,345,613.71	16,828.15	105,645.24	3,309,430.44
Federal Funds	Regular	B.P.I.	249,574.54	434,415.51	115,800.00	123,303.88	43,883.83	103,065.16	479,769.34	6,271.28	31,619.21	1,791,601.68
		B.E. & P.O.	28,572.79	27,192.40	19,000.00	26,941.12	1,476.10	14,483.49	139.44	2,949.64	20,167.47	168,912.77
		Park & Forest Services	9,639.44	1,946.91	-	-	-	-	-	-	779.77	12,366.12
		Sub-Total	288,086.77	463,554.82	134,800.00	150,245.00	45,359.93	117,548.65	507,908.78	9,220.92	52,566.45	1,972,880.57
	Emergency	C.C.C.	313,850.97	147,013.75	87,067.80	155,544.25	104,941.98	147,847.54	661,702.19	346.50	681,974.52	2,202,549.67
		P.W.A.	69,128.95	68,597.21	32,312.50	33,071.89	12,427.98	22,479.39	92,334.23	3,081.48	45,474.63	397,763.96
		W.P.A. State Program	-	-	-	-	-	148,751.86	324.90	-	9,400.00	158,476.76
		W.P.A. Federal Program	478,260.65	463,145.79	203,700.00	277,536.58	34,301.71	76,176.72	843,824.27	7,303.37	341,113.86	2,810,034.77
		C.W.A.	-	-	-	11,134.08	-	5,938.10	-	-	-	37,072.18
		E.R.A.	1,426.80	-	-	10,098.20	-	94,478.40	2,779.70	-	-	109,683.10
		A.R.A.	-	-	-	-	1,640.00	1,152.71	8,010.58	-	4,254.65	15,057.94
		S.C.S.	-	-	-	-	-	-	5,949.50	230.25	7,548.51	13,728.26
		N.Y.A.	-	-	-	-	-	-	-	-	220.80	220.80
		Sub-Total	862,667.37	678,759.75	402,080.30	487,625.00	153,311.67	496,824.72	1,614,925.37	10,961.60	1,089,986.97	5,744,587.44
	Total Federal Funds		1,150,754.14	1,142,314.15	546,885.48	908,151.20	198,671.60	614,373.37	2,122,834.15	20,182.52	1,142,553.42	7,717,468.01
Grand Total			1,474,066.08	1,883,924.26	693,790.66	1,328,677.40	260,916.27	776,320.12	3,468,447.86	37,010.67	1,248,198.66	11,026,898.45
Percentage of Total			13.4	17.1	6.3	10.7	2.4	7.0	31.5	0.3	11.3	100.0

Table 116a - Acreage of White Pine in Northeastern States
(Based on cartographical survey of 1925-1927, except in New Jersey where figures represent estimates made in 1934.)

State	a.-Pure White Pine (80-100% white pine)		b.-Mixed Types Con- taining White Pine		c.-Other Types* With 1-20% White Pine Above Re- stocking Size and Also Pine Restocking	Total* (a+b+c)	White Pine Re-stocking (All types except pure pine under 6" DBH)
	6" and Over DBH	Under 6" DBH	30-79%	21-29%			
Me.	304,790	284,490	794,915	248,258	976,458	2,608,911	1,703,727
N.H.	263,526	548,225	278,366	296,439	157,477	1,544,033	396,558
Vt.	29,923	73,453	160,147	78,415	225,146	567,084	296,733
Mass.	162,113	288,686	273,266	63,765	170,734	958,564	333,085
R.I.	13,343	436	-	-	59,417	73,196	59,417
Conn.	32,697	40,729	66,551	57,794	18,383	216,154	53,071
N.Y.	214,600	457,171	242,218	231,699	170,269	1,315,957	286,104
N.E.&N.Y.	1,020,992	1,693,190	1,815,463	976,370	1,777,884	7,283,899	3,128,695
N.J.	600	1,600	2,000	1,500	2,000	7,600	3,000
Pa.	51,854	40,043	28,078	98,023	157,630	375,628	226,292
All States	1,073,446	1,734,733	1,845,541	1,075,893	1,937,514	7,667,127	3,357,987

*Excludes those "other types" which have 1-20 percent white pine (above restocking size) but do not contain white pine restocking.

A total of 79,520,370 white pines have been distributed from state nurseries in the Northeastern States during the period 1931 to 1938, inclusive, as follows: Maine, 148,200; New Hampshire, 4,177,820; Vermont, 762,785; Massachusetts, 8,268,400; Connecticut, 623,187; New York, 54,827,330; New Jersey, 1,129,700; and Pennsylvania, 9,582,948.

Table 116b.- Commercial Value of White Pine in Northeastern States

State	Pure White Pine (80-100% white pine)		Mixed Types Containing White Pine		White Pine (Above re- stocking size) in Other Types*	White Pine Restocking in All Types Except "Pure Pine Under 6" DBH"	Total (Including white pine restocking)
	6" and Over DBH	Under 6" DBH	30-79%	21-29%			
Me.	\$ 34,136,480	\$ 7,122,250	\$ 44,515,240	\$ 6,951,224	\$ 6,835,206	\$ 2,559,199	\$102,109,599
N.H.	29,514,912	13,705,625	15,588,498	8,300,292	1,102,339	707,534	68,919,198
Vt.	3,351,376	1,836,325	8,968,232	2,195,620	1,576,022	412,279	18,539,854
Mass.	18,156,656	7,217,150	15,302,896	1,785,420	1,195,138	599,752	44,257,012
R.I.	1,494,416	10,900	-	-	415,919	80,818	2,002,055
Conn.	3,662,064	1,018,225	3,726,856	1,618,232	128,681	86,358	10,240,416
N.Y.	24,035,200	11,429,275	13,564,208	6,487,572	1,191,883	419,084	57,127,222
N.E.&N.Y.	114,351,104	42,329,750	101,665,928	27,338,360	12,445,188	4,865,024	302,995,354
N.J.	67,200	37,500	112,000	42,000	14,000	3,000	275,700
Pa.	5,807,648	1,001,075	1,572,368	2,744,644	1,103,410	226,292	12,485,437
All States	\$120,225,952	\$43,368,325	\$103,350,296	\$ 30,125,004	\$13,562,598	\$5,094,316	\$315,726,491

*Excludes those "other types" which have 1-20 percent white pine (above restocking size) but do not contain white pine restocking.

Basis for estimating value of merchantable white pines: stumpage figured at normal value of \$7.00 per M - average contents per acre, pure merchantable white pine = 16 M board feet; mixed white pine, 30-79% = 8 M board feet; mixed white pine, 21-29% = 4 M board feet; and white pine, above restocking size, in other types = 1 M board feet. Pure stands of white pine under 6" DBH given normal value of \$25.00 per acre.

Basis for estimating normal per acre value of white pine restocking: degree of restocking, light = \$1.00, medium = \$2.00, heavy = \$3.00.

Table 117 - Relation of Total Cost of All Control Activities to
Total Commercial Value of White Pine in Northeastern States

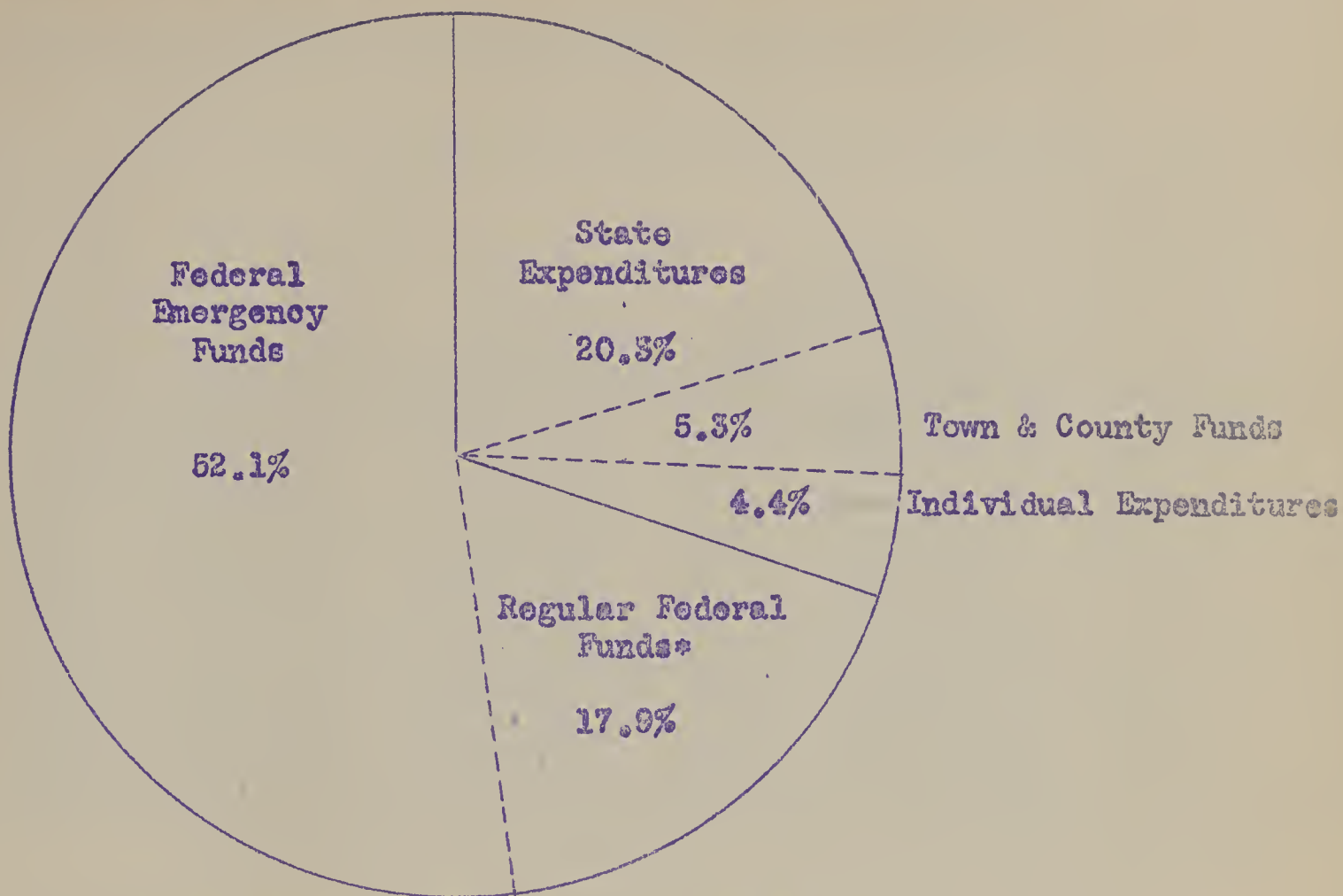
State	Acreage of White Pine	Commercial Value of White Pine	Total Cost of All Control Activities	Percentage of Total Commercial Value of Pine Represented by Cost of All Control Activities	Percentage of Present Total Control Area Protected	
					Initial	Re-Erad
Maine	2,608,911	\$102,109,599.	\$ 1,474,066.08	1.4	72.8	18.8
N.H.	1,544,033	68,919,198.	1,883,924.28	2.7	91.5	23.1
Vt.	567,084	18,839,854.	693,718.33	3.8	47.3	14.5
Mass.	958,564	44,257,012.	1,184,296.20	2.7	97.5	42.9
N.J.	73,193	2,002,053.	260,916.27	13.0	93.3	81.0
Penn.	216,154	10,240,416.	776,320.12	7.6	80.2	56.0
N.Y.	1,316,957	57,127,222.	3,468,447.86	6.1	63.1	17.1
N.J.	7,600	275,700.	37,010.67	13.4	48.9	4.0
Penn.	375,628	12,455,437	1,243,198.66	10.0	34.4	12.9
Totals	7,667,127	315,726,491	11,026,898.45	3.5	74.3	24.8

The comparatively high percentage figures in Rhode Island, New Jersey and Pennsylvania may be attributed to the following facts. In Rhode Island, over a hundred thousand acres of potential pine land has been cleared of Ribes in addition to the protection of the pine area. The value of the potential pine acreage is not, of course, included in the pine values. In New Jersey and Pennsylvania, the pine areas are small and scattered necessitating larger proportionate protection zones. In both states, practically all the control work has been performed by inexperienced men employed on Emergency Programs. The cost of control activities in Pennsylvania and New Jersey prior to the beginning of Ribes eradication work in 1929 and 1934, respectively, is included in the total expenditure figures. Only 16,742 acres have been initially worked in New Jersey. The major control activities in that state comprise scouting, field studies, nursery sanitation, and informational and service work. In Pennsylvania, the Ribes are numerous and of large size. Many of the pine areas are in remote hilly sections at considerable distance from roads.

The total cost includes \$5,744,587.44 Federal Emergency money expended on control work since 1933. This amount represents 52.1 percent of the total expenditures since 1918. A portion of the Emergency money could properly be charged to relief rather than control activities.

The basis for acreages and values of white pine are given on Page 156.

COOPERATIVE BLISTER RUST CONTROL EXPENDITURES
IN NORTHEASTERN STATES, 1918-1938, INCLUSIVE.



Total Expenditures - \$11,026,898.45

* Includes \$12,366.12 by Forest and
Park Services

Relation Commercial Value of White Pine to Total Cost
of All Control Activities in Northeastern States
1918-1938, Inclusive.

0 100 200 300 400 Million Dollars



Commercial Value
of White Pine

\$315,726,491.00



Total Cost of All
Control Activities
by All Agencies

\$11,026,898.45

Total control cost represents 3.5% commercial pine value.

Table 118 - Per Acre Cost of Ribes Eradication Work in Northeastern States
During Period 1918 to 1938, Inclusive

(Based on Ribes eradication costs only and on the total costs of all control activities by all cooperating agencies)

State	Total Acreage Cleared of Ribes (Initial & Re-Erad.)	Number Ribes Pulled		Total Cost of Ribes Eradication*	Total Cost of All Control Activities	Ribes Per Acre (Wild only)	Cost Per Acre			
							Eradication Costs Only		Total Expenditures All Projects	
							1918 to 1938	Ave. Per Year	1918 to 1938	Ave. Per Year
Co.	2,764,939	51,888,336	147,627	\$876,011.64	1,474,066.08	18.8	.317	.015	.533	.025
N.H.	3,851,150	64,035,148	153,002	1,108,736.75	1,883,924.26	16.6	.288	.014	.489	.023
Vt.	538,565	11,452,656	16,245	379,878.17	693,718.33	21.3	.705	.034	1.29	.061
Mass.	2,748,503	20,240,975	275,643	602,642.45	1,184,296.20	7.4	.219	.010	.431	.021
N.Y.	588,029	571,842	23,090	143,396.61	260,916.27	1.0	.244	.012	.444	.021
Conn.	586,071	5,823,566	37,988	296,215.28	776,320.12	8.5	.432	.021	1.13	.054
N.J.	2,662,178	60,997,786	121,734	2,068,569.34	3,468,447.86	23.8	.807	.038	1.35	.064
Penn.	18,739,435	215,010,309	775,329	5,475,340.24	9,741,689.12	15.6	.399	.019	.709	.034
Del.	18,159	64,736	1,728	6,915.69	37,010.67	3.6	.381	-	2.04	-
Pa.	582,977	32,605,092	44,761	789,614.25	1,248,198.66	55.9	1.35	-	2.14	-
Totals	14,340,671	247,680,137	821,818	6,271,870.18	11,026,898.45	17.3	.437	-	.769	-

*Excludes nursery sanitation and Ribes nigrum elimination.

Costs per acre per year for Pennsylvania, New Jersey and all states were omitted from the above table because Ribes eradication work in those states was not begun until 1929 and 1934, respectively. In New Jersey, only a few thousand acres have been cleared of Ribes; the control activities being confined chiefly to pine and infection scouting, field studies, nursery sanitation, and informational and service work by part-time employees. No satisfactory comparison can be made between the per acre costs in the various states, due to numerous factors directly affecting the cost of the eradication work. The lower per acre cost in Maine, Massachusetts, Rhode Island and New Hampshire may be attributed in part to the localization of the Ribes in certain sections and that under the Regular program large portions have been worked by scouting methods. In New York, Pennsylvania, and Vermont, the cost has been increased by the size and abundance of the Ribes, and in the first two states by the ruggedness of the topography and the inaccessibility of many of the control areas. The small size and scattered distribution of the pine areas in Pennsylvania, New Jersey, and Connecticut has likewise increased per acre costs in these states. Most of the control work in Pennsylvania and New Jersey has also been performed under various Emergency programs with an inexperienced personnel. In 1933, the per acre cost in New England and New York, based on Ribes eradication work only and on the total area worked up to that time, amounted to 22.7 cents. By 1938, it had increased to 43.7 cents chiefly due to the less efficient work performed under the Emergency programs.

The compilation of per acre values on the basis of total costs of all control activities by all cooperating agencies is probably not justifiable, because such expenditures include among other items the cost of field surveys and studies, informational and service activities, nursery sanitation, canker elimination, and Ribes nigrum elimination which are not directly related to the regular Ribes eradication work and cannot in most instances be figured on a per acre basis.

ANNUAL REPORT
ON
WHITE PINE BLISTER RUST CONTROL
SOUTHERN APPALACHIAN DISTRICT

1 9 3 8

By
Roy G. Pierce, Pathologist
DIVISION OF PLANT DISEASE CONTROL

May 1939



White pine in Georgia grows to large size in a short period. Note distance between whorls.

Photo by Dr. S. B. Fracker.



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BRIEF SUMMARY OF THE YEAR'S WORK

IN THE SOUTHERN APPALACHIAN STATES

The year 1938 marks the fifth year of large scale survey and control work. Thanks to generous allotments from PWA up to June 30, 1935 and from WPA since July 1, 1935 and Regular appropriations to the Department of Agriculture supplemented by direct appropriations or allotments from North Carolina, Virginia and West Virginia, and by the allotment of office space, materials and contributed services from all cooperating States we have reached a point where we can estimate fairly well the time when all pine lands worth working will have been surveyed and mapped by some system, and the time when initial protection will have been given the worthwhile pine.

Pine Surveys have been completed in Delaware, Kentucky, Maryland and South Carolina, and should be completed in another year in West Virginia, and I believe in two years in North Carolina, Tennessee and Virginia. Resurveys by the grid system of mapping are "picking up" additional pine acreage and Ribes in North Carolina. Resurveys will be carried on in Tennessee in 1939 in the Cherokee National Forest, since the original survey by Forest Service Checkers covered only the "Cream" of the pine in that Forest, extending down only to pine which averaged between 10 and 20 percent of the stand. In Virginia we have been handicapped by the fact that we could not get men assigned to our project from certain counties where survey and control work was needed, and by the fact that we had no State funds allotted for that purpose which we could use in such counties to employ local men.

Control Work has been carried on vigorously, approximately 4,600,000 wild bushes and 155,000 cultivated gooseberries and currants being destroyed this past year on 735,000 acres. Initial eradication since 1918 has been carried on over 4,855,000 acres of land (including all workings), over 21,481,000 wild Ribes and 1,109,000 cultivated Ribes being destroyed by the use of 195,448 man-hours of labor.

Cooperation was secured from the CCC in Maryland, Virginia and West Virginia in Ribes eradication, 2,405 eight hour-man days being used; and in North Carolina from the CCC in survey work with 53 man-days of labor; and from Virginia in the treatment of infected pines with 221 man-days of labor.

THIRD ANNUAL REPORT OF THE FOREST SERVICE
IN THE FOREST AND RIVER PROTECTION DIVISION

The year 1935 marks the fifth year of large scale survey and control work. Thanks to generous allocations from the U.S. Treasury, 1935 and from the U.S. Forest Service, 1935 and regular appropriations to the Department of Agriculture supplemented by direct appropriations to the Forest Service from North Carolina, Virginia and West Virginia, and by the allotment of office space, materials and contracted services from all cooperating States we have reached a point where we can estimate fairly well the time when all pine lands worth working will have been surveyed and mapped by some system, and the time when initial protection will have been given the vulnerable pine.

The surveys have been completed in Delaware, Kentucky, Maryland and North Carolina, and should be completed in another year in West Virginia, and I believe in two years in North Carolina, Tennessee and Virginia. Surveys by the grid system of mapping are "picking up" additional pine acreage and rivers in North Carolina. Surveys will be carried on in Tennessee in 1936 in the Cherokee National Forest, since the original survey by Forest Service workers covered only the "cream" of the pine in that forest, extending down only to pine which occurred between 10 and 20 percent of the stand. In Virginia we have been handicapped by the fact that we could not get an assigned to our project from certain counties where survey and control work was needed, and by the fact that we had no State funds allotted for that purpose which we could use in such counties to employ local men.

Control work has been carried on vigorously, especially in Maryland, West Virginia and North Carolina. About 1,500,000 wild oaks and 1,500,000 white oaks have been cut and burned being destroyed this past year on 752,000 acres. Initial eradication since 1918 has been carried on over 4,500,000 acres of land (including all wild oaks), over 21,401,000 wild oaks and 1,100,000 white oaks being destroyed by the use of 105,400 man-days of labor.

Cooperation was secured from the U.S. in Maryland, Virginia and West Virginia in these eradication. 2,400 eight hour-man days being used, and in North Carolina from the U.S. in survey work with 50 man-days of labor; and from Virginia in the treatment of infested pine with 221 man-days of labor.

Cooperation was secured from the Several States in the services of persons employed by the States for our work including two agents and one clerk part time in West Virginia, one clerk six months in Virginia and two agents several clerks and a number of laborers in North Carolina. Other forms of cooperation by the States and their cooperators consisted of field trips by the cooperator and his assistants, furnishing of space in State or County buildings, the furnishing of telephone service, mimeographing service, the destruction of cultivated bushes, the destruction of wild bushes by Girl Scouts, nursery inspection by Regular State force, etc.

Treatment of infected pines was carried on only in Virginia in 1938, 314 acres being worked in the Shenandoah National Park and 298 acres in the George Washington National Forest. Of the trees examined in the Park, the number of trees treated amounted to 35.8%, while the number of trees removed amounted to but 1.6%. In the George Washington National Forest the percent of trees examined which were treated (that is pruned) amounted to but 0.7 percent.

Nursery Sanitation was carried on by our Agents and laborers in six States, 24 nurseries being examined. These nurseries have over 1,395,000 pines growing. 3,926 Ribes were removed from the control zones and in their immediate vicinity. No blister rust has as yet been found in any of these pine-growing nurseries.

No Black Currant eradication project was carried on in the District.

Infection Conditions. The blister rust spread slowly in 1938 according to observations. Five new counties however were found with infections: Four in Virginia; Greene, Rockbridge, Shenandoah and Warren, and one in West Virginia - Hardy. Within Virginia many new blister rust centers were found particularly in the counties with old infections; viz, Augusta five, Highland nine, and Rockbridge County 13. In the other Virginia Counties new infections were as follows: Greene two, Page one, Rockbridge one, Shenandoah one and Warren one.

Transportation is an essential part of the project. Fortunately our shortage of trucks was met by the transfer of a considerable number of light pick-up trucks and delivery sedans from other Divisions of the Bureau. We still have on hand about 15 - 1933 model ton and a half stakebody trucks which at the end of 1938, had six years of service, with speedometer readings varying from 38,600 to 69,975. Most of these are in active service, tho they are a constant source of expense for upkeep and repair. It is hoped that these aged trucks can be gradually retired and replaced by smaller halfton pick-ups, delivery sedans or station wagons.

Cooperation was secured from the several States in the service of persons employed by the Forest for our work including two agents and one clerk paid time in West Virginia, one of our men in Virginia and two agents several clerks and a number of laborers in North Carolina. Other forms of cooperation by the Forest and State cooperators consisted of field trips by the cooperator and his assistants, furnishing of space in State or County buildings, the furnishing of telephone service, miscellaneous services, the donation of cultivated lands, the donation of wild lands by Wild Geese, nursery inputs, etc. by regular State force, etc.

Treatment of selected areas was carried on only in Virginia in 1935. The areas being worked in the Shenandoah National Park and 950 acres in the George Washington National Forest. Of the trees examined in the Park, the number of trees treated amounted to 25.8%, while the number of trees removed amounted to 1.6%. In the George Washington National Forest the percent of trees examined which were treated (that is burned) amounted to 0.7 percent.

Inventory completed was carried on by our Agents and laborers in six States, 24 nurseries being examined. These nurseries have over 1,200,000 plants growing. 2,500 birds were removed from the control zones and in their immediate vicinity. No other work has as yet been done in any of these fire-growing nurseries.

The Black Walnut eradication project was carried on in the District.

Infestation conditions. The District has spread slowly in 1935 according to observations. Five new counties however were found with infestations: Four in Virginia; Greene, Rockbridge, Shenandoah and Warren, and one in West Virginia - Hardy. Within Virginia many new blights were found early in the summer with old infestations still active. In the other Virginia blighted areas, and Rockbridge County is, in the other Virginia Counties new infestations were as follows: Greene two, Page one, Rockbridge one, Shenandoah one and Warren one.

Transportation is an essential part of the project. For trucks our average of trucks was not by the transfer of a considerable number of light pick-up trucks and delivery wagons from other Districts of the Bureau. We still have no hand trucks 15 - 1905 model ton and a half equipped trucks which at the end of 1935, had six years of service, with speedometers removed varying from 25,000 to 35,000. Most of these are in active service, and they are a constant source of expense for upkeep and repair. It is hoped that these used trucks can be gradually retired and replaced by smaller delivery pick-ups. Delivery wagons of station wagons.

Administrative Personnel of the Southern Appalachian States remained for the most part the same as in 1937. Mr. Harry K. Cooper was appointed Principal Clerk in the Richmond Office replacing Mr. L. A. Placek who was transferred to the Division of Domestic Plant Quarantine. We were fortunate in also having Mr. J. C. Ball transferred to this Division from California, his special work being that of surveying, mapping and checking eradication work. Agents Hamric, Hopper and McNeel resigned during the year. Work was begun in Delaware and the District of Columbia under the general supervision of Mr. Yost of Maryland. In Delaware Mr. Bernard Pufahl has acted as Agent in charge, although classified as Professional in WPA. In South Carolina, Mr. James Mann, formerly State leader, put in a half month's work rechecking areas for cultivated bushes and surveying pine in a new district, formerly thought to be in North Carolina.

Statistical Tables on all phases of the work are to be found in the various sections following:

1. That the Bureau of Entomology and Plant Quarantine through our various divisions is working on the National Forests in the Southern Appalachian States as in the past, surveying, mapping, applying control methods and making eliminations. This work has been satisfactory to the Forest Service, I believe. Because of the nature of the work involving skilled workers and trained laborers, and close supervision of agents whose main object is to keep pest numbers, I believe that much better results can be achieved in this District by our continuing the fine surveying and other control work.
2. That our Division is authorized to conduct control work on other National lands in the District where only the men are used today, and hope to accomplish better than supplied the work of the FCI, the location of our control work as is authorized by the Forest Service in charge of such National lands.
3. That adequate funds be allocated for the work in the Southern Appalachian States by the Federal Government, for in the past several years which funds will supply most funds appropriated by the Federal System and cooperating agencies.
4. That regular funds rather than Emergency funds be appropriated for the work in the District, for the sake of efficiency and economy.

Administrative Personnel of the Southern Department
has been furnished for the past year the same as in 1937. Mr.
Harry E. Connor was appointed District II in the following
Office replacing Mr. L. A. Black who was transferred to the
Division of Domestic Black Operations. He was formerly in
also having Mr. J. D. Ellis transferred to this Division from
District II, his special work being that of supervising, training
and conducting operations work. Agents Harry, Connor and
Kocher remained during the year. Work was done in Delaware
and the District of Columbia under the general supervision
of Mr. J. D. Ellis. In Delaware Mr. Connor's duties
has been as Agent in Charge, although officially as District
Agent in WPA. In South Carolina, Mr. Harry Black, formerly
District leader, but in a part month's work remaining there
for unexpired contract and supervising work in a new district.
Formerly thought to be in South Carolina.

Statistical Tables on all phases of the work are to be
found in the various sections following:

RECOMMENDATIONS

It is recommended:

1. That the State Leaders be placed on a more permanent basis and be paid from Regular funds.
2. That each State Leader have at least 1 clerk on same permanent Civil Service basis.
3. That the Principal Clerk, Mr. Cooper, and Mrs. Hudgins, be paid from Regular funds and that at least 3 additional clerks or stenographers in the District Office be placed upon a more permanent basis. Administrative funds are now used to pay salaries of Mr. Cooper, Mrs. Hudgins, Mrs. Fischer and Miss Hudson.
4. That Mr. Ball be attached permanently to the District Office at Richmond, because of the excellent work he has been doing on pine surveys and mapping also checking in the various states.
5. That the Bureau of Entomology and Plant Quarantine through our Division continue to work on the National Forests in the Southern Appalachian States as in the past, surveying, mapping, applying control methods and canker elimination. This work has been satisfactory to the Forest Service, I believe. Because of the nature of the work requiring skilled foreman and trained laborers, and close supervision of Agents whose sole object is blister rust control, I believe that much better results can be achieved in this District by our continuing the pine surveying and other control work.
6. That our Division be authorized to conduct control work on other National Lands in the District where only CCC men are used today, our work to supplement rather than supplant the work of the CCC, the location of our control work to be determined by the officer in charge of such federal lands.
7. That adequate funds be allotted for the work in the Southern Appalachian States by the Federal Government, (as in the past several years) which funds will supplement those appropriated by the several States and cooperating agencies.
8. That regular funds rather than Emergency funds be appropriated for the work in the District, for the sake of efficiency and economy.

RECOMMENDATIONS

It is recommended:

1. That the State Lands be placed in a more systematic basis and be sold from regular funds.
2. That each State Lands be placed in a more systematic basis and be sold from regular funds.
3. That the Principal Clerk, Mr. Cooper, and the Assistant Clerk, Mr. Huggins, be placed in the State Lands Office to handle the sale of the lands and be paid salaries of \$7,000 per annum, Mr. Huggins, Mr. Huggins and Mr. Huggins.
4. That Mr. Hall be attached permanently to the State Lands Office at Richmond, because of the excellent work he has been doing on the maps and surveys and also on the various matters.
5. That the Bureau of Entomology and Plant Quarantine through its Division of Entomology be sent on the National Forests in the Southern States to make a survey of the pest, surveying, mapping, and other control methods and other elimination. This work has been satisfactory to the Forest Service, I believe. Because of the nature of the work requiring skilled foreman and trained labor, and also supervision of agents whose sole object is to protect the forest, I believe that such work is better done in this Division by our entomologists and the fine entomology and other control work.
6. That our Division be authorized to conduct control work on other National Lands in the States where only CCC men are used today, our work be made more regular than the work of the CCC, the location of our control work to be determined by the office in charge of such Federal lands.
7. That adequate funds be allocated for the work in the Southern States as provided for by the Federal Government, (as in the past several years) which funds will supply the State Lands Office by the Federal Lands Office and cooperative agencies.
8. That regular funds be set aside for the sale of the lands for the work in the States, for the sale of efficiency and economy.

9. That each year there be come replacement of trucks by purchase since many are six years old with mileage over 50,000.
10. That passenger carrying automobiles be purchased or secured from confiscated property in the Procurement Division until each State Leader has such automobiles for official use.

*Respectfully
Submitted*

*Roy G. Pierre
Pathologist*

May 27, 1939

That each year there is some replacement of houses by
Tutuban alone may not be true and will always
be so.

1. The following information was obtained from the records of the Department of the Interior, Bureau of Land Management, regarding the land owned by the United States in the State of Nevada:

Robert G. Thompson

Dear Mr. Brewster

Hand 5/1/12

OMNIBUS STATISTICAL TABLES
OF ALL BLISTER RUST CONTROL WORK IN
SOUTHERN APPALACHIAN STATES
In 1938 and From
1918 - 1938

TABLE 1.
SUMMARY OF 1938 RIBES ERADICATION

STATES	1st WORKING				2nd WORKING				3rd WORKING				4TH WORKING				TOTALS			PERCENTAGE ACREAGE WORKED*								
	Acreage Worked	Number Ribes Destroyed		Number 8 hour m-days	Acreage Worked	Number Ribes Destroyed		Number 8 hour M-Days	Acreage Worked	Number Ribes Destroyed		No. 8 hr.m days	Acreage Worked	No. Ribes Destroyed		No. 8 hour man- days	Acreage Worked	No. Ribes Destroyed		No. 8 M-Days	1st Work	2nd Work	3rd Work	4th Work	RIBES PER ACRE			
		Wild	Culti.			Wild	Culti.			Wild	Culti.			Wild	Culti.			1st Work	2nd Work						3rd Work	4th Work		
																											1st Work	2nd Work
Delaware	1,076 (2)	0	638	43													1,076	638	43	100					59			
District of Columbia	No Ribes Eradication																											
Georgia	89,925	769,541	53,786	5,098	8,500	90,155		909									98,425	859,696	53,786	6,007	91.4	8.6			9.15	10.6		
Kentucky	1,090	0		(3)													1,090	0	0	0	100.0							
Maryland	5,389	301,774	151 ⁽⁴⁾	1,649 ⁽⁵⁾	817	91,588	4 ⁽⁴⁾	504	340	8,665	0	124	2,420	3,904	7	217	6,966	405,931	154	2,494	48.0	12.0	5.0	35.0	88.0	112.0	25.0	1.6
North Carolina	213,418	116,199	22,642	2,259	42,934	27,059	3803	1,205	67	0	2746	149					256,419	143,258	29,191	3,613	83.1	16.8	0.1	0	0.69	0.71	40.9	
South Carolina	3,100	0	1	4	0	0	0	0	45 ⁽¹⁾	0	11	8					3,145	0	12	12	98.9		1.1		.0003		0.24	
Tennessee	130,289	1585,440	62,668	10,773	134	4,182	0	57	0	0	0	0					130,423	1589,622	62,668	10,830	99.8	0.2	0		12.5	31.0	0	
Virginia	71,868	665,234	3,952	8,139	3,678	82,553	12	1,725	2700	30,421	0	825					78,246	778,208	3,964	10,689	91.8	4.7	3.5		9.3	22.4	11.2	
West Virginia	149,287	810,546	4,428	6,905	9,931	8,865	4	235	0	0	0	0					159,218	819,411	4,432	7,140	94.0	6.0			5.46	0.89		
T O T A L	663,442	4248,734	148,266	34,870	65,994	304,402	3815	4,635	3152	39,086	2757	1106	2,420	3,904	7	217	735,008	4596,126	154,845	40,828	90.3	9.0	0.4	0.3	6.62	4.65	13.3	1.6

- (1) In South Carolina 45 homes and house sites were searched for cultivated Ribes, area of each being calculated at one acre *Percentage of Total White Pine Control Acreage worked during 1938
 (1) 1938 figure raised by 13 to account for an error in previous years
 (2) In Delaware, in addition to acreage worked, 2,722 trees of ornamental value have been mapped and size noted.
 (3) Work performed by R. G. Pierce
 (4) Correction made in cultivated bushes in 1938 to bring about correction in totals for region, 14 being added to that of 1st working and 14 subtracted from 2nd working
 (5) Figure raised 13 to account for error in previous years.
 NOTE: Cultivated Ribes as used in these tables include not only bushes at occupied houses but those at unoccupied houses, old house sites and escaped cultivated bushes.

TABLE 2
SUMMARY OF 1938 RIBES ERADICATION BY PROGRAMS
(Including all work - 1st, 2nd, 3rd and 4th Workings)

STATES	TOTAL ACREAGE WORKED, 1st, 2nd, 3rd and 4th	REGULAR AND COOPERATIVE					(including all work done, 1st, 2nd, 3rd, and 4th, by W. P. A. AND E. R. A.					E. C. W					TOTALS							
		Acreage Worked	No. Ribes Destroyed		No. 8 hour man-days	Acreage Worked	No. Ribes Destroyed		No. 8 hour man-days	Acreage Worked	No. Ribes Destroyed		No. 8 Hour Man-Days	Acreage Worked	No. Ribes Destroyed		No. 8 hour man-days							
			Wild	Culti.			Wild	Culti.			Wild	Culti.			Wild	Culti.								
Delaware	1,076			32			1,076			606			43				1,076			638			43	
District of Columbia																								
Georgia	98,425						98,425	859,696		53,786		6,007					98,425	859,696		53,786			6,007	
Kentucky	1,090	1,090															1,090	0		0			0	
Maryland	6,966	980	68	43	2		3,094	380,337		106		1,901		2,892	25,526			6,966	405,931		154		2,494	
North Carolina	256,419	48,217	9,542	2,292	168		208,202	133,746		26,899		2,445					256,419	143,258		29,191			3,613	
South Carolina	3,145	3,145	0	12	12		0	0		0		0					3,145	0		12			12	
Tennessee	130,423	0	0	0	0		130,423	1589,622		62,668		10,830					130,423	1589,622		62,668			10,830	
Virginia	78,246	22	614	0	31		77,504	751,787		3,964		10,382		720	25,807			78,246	778,208		3,964		10,689	
West Virginia	159,218	3,702	22842	0	244		148,150	607,552		4,430		5,358		7,366	189,017	2	1,538	159,218	819,411		4,432		7,140	
TOTAL	735,008	57,156	33,036	2,384	457		666,874	4322,740		152,459		37,966		10,978	240,350	2	2,405	735,008	4596,126		154,845			40,828

1960-1961		1961-1962		1962-1963		1963-1964		1964-1965		1965-1966		1966-1967		1967-1968		1968-1969		1969-1970		1970-1971		1971-1972		1972-1973		1973-1974		1974-1975		1975-1976		1976-1977		1977-1978		1978-1979		1979-1980		1980-1981		1981-1982		1982-1983		1983-1984		1984-1985		1985-1986		1986-1987		1987-1988		1988-1989		1989-1990		1990-1991		1991-1992		1992-1993		1993-1994		1994-1995		1995-1996		1996-1997		1997-1998		1998-1999		1999-2000		2000-2001		2001-2002		2002-2003		2003-2004		2004-2005		2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018		2018-2019		2019-2020		2020-2021		2021-2022		2022-2023		2023-2024		2024-2025		2025-2026		2026-2027		2027-2028		2028-2029		2029-2030		2030-2031		2031-2032		2032-2033		2033-2034		2034-2035		2035-2036		2036-2037		2037-2038		2038-2039		2039-2040		2040-2041		2041-2042		2042-2043		2043-2044		2044-2045		2045-2046		2046-2047		2047-2048		2048-2049		2049-2050		2050-2051		2051-2052		2052-2053		2053-2054		2054-2055		2055-2056		2056-2057		2057-2058		2058-2059		2059-2060		2060-2061		2061-2062		2062-2063		2063-2064		2064-2065		2065-2066		2066-2067		2067-2068		2068-2069		2069-2070		2070-2071		2071-2072		2072-2073		2073-2074		2074-2075		2075-2076		2076-2077		2077-2078		2078-2079		2079-2080		2080-2081		2081-2082		2082-2083		2083-2084		2084-2085		2085-2086		2086-2087		2087-2088		2088-2089		2089-2090		2090-2091		2091-2092		2092-2093		2093-2094		2094-2095		2095-2096		2096-2097		2097-2098		2098-2099		2099-2100		2100-2101		2101-2102		2102-2103		2103-2104		2104-2105		2105-2106		2106-2107		2107-2108		2108-2109		2109-2110		2110-2111		2111-2112		2112-2113		2113-2114		2114-2115		2115-2116		2116-2117		2117-2118		2118-2119		2119-2120		2120-2121		2121-2122		2122-2123		2123-2124		2124-2125		2125-2126		2126-2127		2127-2128		2128-2129		2129-2130		2130-2131		2131-2132		2132-2133		2133-2134		2134-2135		2135-2136		2136-2137		2137-2138		2138-2139		2139-2140		2140-2141		2141-2142		2142-2143		2143-2144		2144-2145		2145-2146		2146-2147		2147-2148		2148-2149		2149-2150		2150-2151		2151-2152		2152-2153		2153-2154		2154-2155		2155-2156		2156-2157		2157-2158		2158-2159		2159-2160		2160-2161		2161-2162		2162-2163		2163-2164		2164-2165		2165-2166		2166-2167		2167-2168		2168-2169		2169-2170		2170-2171		2171-2172		2172-2173		2173-2174		2174-2175		2175-2176		2176-2177		2177-2178		2178-2179		2179-2180		2180-2181		2181-2182		2182-2183		2183-2184		2184-2185		2185-2186		2186-2187		2187-2188		2188-2189		2189-2190		2190-2191		2191-2192		2192-2193		2193-2194		2194-2195		2195-2196		2196-2197		2197-2198		2198-2199		2199-2200		2200-2201		2201-2202		2202-2203		2203-2204		2204-2205		2205-2206		2206-2207		2207-2208		2208-2209		2209-2210		2210-2211		2211-2212		2212-2213		2213-2214		2214-2215		2215-2216		2216-2217		2217-2218		2218-2219		2219-2220		2220-2221		2221-2222		2222-2223		2223-2224		2224-2225		2225-2226		2226-2227		2227-2228		2228-2229		2229-2230		2230-2231		2231-2232		2232-2233		2233-2234		2234-2235		2235-2236		2236-2237		2237-2238		2238-2239		2239-2240		2240-2241		2241-2242		2242-2243		2243-2244		2244-2245		2245-2246		2246-2247		2247-2248		2248-2249		2249-2250		2250-2251		2251-2252		2252-2253		2253-2254		2254-2255		2255-2256		2256-2257		2257-2258		2258-2259		2259-2260		2260-2261		2261-2262		2262-2263		2263-2264		2264-2265		2265-2266		2266-2267		2267-2268		2268-2269		2269-2270		2270-2271		2271-2272		2272-2273		2273-2274		2274-2275		2275-2276		2276-2277		2277-2278		2278-2279		2279-2280		2280-2281		2281-2282		2282-2283		2283-2284		2284-2285		2285-2286		2286-2287		2287-2288		2288-2289		2289-2290		2290-2291		2291-2292		2292-2293		2293-2294		2294-2295		2295-2296		2296-2297		2297-2298		2298-2299		2299-2300		2300-2301		2301-2302		2302-2303		2303-2304		2304-2305		2305-2306		2306-2307		2307-2308		2308-2309		2309-2310		2310-2311		2311-2312		2312-2313		2313-2314		2314-2315		2315-2316		2316-2317		2317-2318		2318-2319		2319-2320		2320-2321		2321-2322		2322-2323		2323-2324		2324-2325		2325-2326		2326-2327		2327-2328		2328-2329		2329-2330		2330-2331		2331-2332		2332-2333		2333-2334		2334-2335		2335-2336		2336-2337		2337-2338		2338-2339		2339-2340		2340-2341		2341-2342		2342-2343		2343-2344		2344-2345		2345-2346		2346-2347		2347-2348		2348-2349		2349-2350		2350-2351		2351-2352		2352-2353		2353-2354		2354-2355		2355-2356		2356-2357		2357-2358		2358-2359		2359-2360		2360-2361		2361-2362		2362-2363		2363-2364		2364-2365		2365-2366		2366-2367		2367-2368		2368-2369		2369-2370		2370-2371		2371-2372		2372-2373		2373-2374		2374-2375		2375-2376		2376-2377		2377-2378		2378-2379		2379-2380		2380-2381		2381-2382		2382-2383		2383-2384		2384-2385		2385-2386		2386-2387		2387-2388		2388-2389		2389-2390		2390-2391		2391-2392		2392-2393		2393-2394		2394-2395		2395-2396		2396-2397		2397-2398		2398-2399		2399-2400		2400-2401		2401-2402		2402-2403		2403-2404		2404-2405		2405-2406		2406-2407		2407-2408		2408-2409		2409-2410		2410-2411		2411-2412		2412-2413		2413-2414		2414-2415		2415-2416		2416-2417		2417-2418		2418-2419		2419-2420		2420-2421		2421-2422		2422-2423		2423-2424		2424-2425		2425-2426		2426-2427		2427-2428		2428-2429		2429-2430		2430-2431		2431-2432		2432-2433		2433-2434		2434-2435		2435-2436		2436-2437		2437-2438		2438-2439		2439-2440		2440-2441		2441-2442		2442-2443		2443-2444		2444-2445		2445-2446		2446-2447		2447-2448		2448-2449		2449-2450		2450-2451		2451-2452		2452-2453		2453-2454		2454-2455		2455-2456		2456-2457		2457-2458		2458-2459		2459-2460		2460-2461		2461-2462		2462-2463		2463-2464		2464-2465		2465-2466		2466-2467		2467-2468		2468-2469		2469-2470		2470-2471		2471-2472		2472-2473		2473-2474		2474-2475		2475-2476		2476-2477		2477-2478		2478-2479		2479-2480		2480-2481		2481-2482		2482-2483		2483-2484		2484-2485		2485-2486		2486-2487		2487-2488		2488-2489		2489-2490		2490-2491		2491-2492		2492-2493		2493-2494		2494-2495		2495-2496		2496-2497		2497-2498		2498-2499		2499-2500		2500-2501		2501-2502		2502-2503		2503-2504		2504-2505		2505-2506		2506-2507		2507-2508		2508-2509		2509-2510		2510-2511		2511-2512		2512-2513		2513-2514		2514-2515		2515-2516		2516-2517		2517-2518		2518-2519		2519-2520		2520-2521		2521-2522		2522-2523		2523-2524		2524-2525		2525-2526		2526-2527		2527-2528		2528-2529		2529-2530		2530-2531		2531-2532		2532-2533		2533-2534		2534-2535		2535-2536		2536-2537		2537-2538		2538-2539		2539-2540		2540-2541		2541-2542		2542-2543		2543-2544		2544-2545		2545-2546		2546-2547		2547-2548		2548-2549		2549-2550		2550-2551		2551-2552		2552-2553		2553-2554		2554-2555		2555-2556		2556-2557		2557-2558		2558-2559		2559-2560		2560-2561		2561-2562		2562-2563		2563-2564		2564-2565		2565-2566		2566-2567		2567-2568		2568-2569		2569-2570		2570-2571		2571-2572		2572-2573		2573-2574		2574-2575		2575-2576		2576-2577		2577-2578		2578-2579		2579-2580		2580-2581		2581-2582		2582-2583		2583-2584		2584-2585		2585-2586		2586-2587		2587-2588		2588-2589		2589-2590		2590-2591		2591-2592		2592-2593		2593-2594		2594-2595		2595-2596		2596-2597		2597-2598		2598-2599		2599-2600		2600-2601		2601-2602		2602-2603		2603-2604		2604-2605		2605-2606		2606-2607		2607-2608		2608-2609		2609-2610		2610-2611		2611-2612		2612-2613		2613-2614		2614-2615		2615-2616		2616-2617		2617-2618		2618-2619		2619-2620		2620-2621		2621-2622		2622-2623		2623-2624		2624-2625		2625-2626		2626-2627		2627-2628		2628-2629		2629-2630		2630-2631		2631-2632		2632-2633		2633-2634		2634-2635		2635-2636		2636-2637		2637-2638		2638-2639		2639-2640		2640-2641		2641-2642		2642-2643		2643-2644		2644-2645		2645-2646		2646-2647		2647-2648		2648-2649		2649-2650		2650-2651		2651-2652		2652-2653		2653-2654		2654-2655		2655-2656		2656-2657		2657-2658		2658-2659		2659-2660		2660-2661		2661-2662		2662-2663		2663-2664		2664-2665		2665-2666		2666-2667		2667-2668		2668-2669		2669-2670		2670-2671		2671-2672		2672-2673		2673-2674		2674-2675		2675-2676		2676-2677		2677-2678		2678-2679		2679-2680		2680-2681		2681-2682		2682-2683		2683-2684		2684-2685		2685-2686		2686-2687		2687-2688	
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TABLE 1
(continued)
SUMMARY OF 1938 RIBES ERADICATION

STATE	MAN-DAYS PER ACRE				NUMBER OF CAMPS				NUMBER EMPLOYEES				All Super- vision	Total Employees
	1st Work	2nd Work	3rd Work	4th Work	CCC	WPA	ReG.	Total	CCC	WPA	REG.	Total		
Delaware	0.04									4		4	1	5
District of Columbia														
Georgia	0.56	0.107								102		102	2	104
Kentucky													1	1
Maryland	0.6	0.6	0.36	.09	3			3	48	23		71	2	73
North Carolina	0.01	.003	2.22							221	16	237	6	243
South Carolina	.0012		0.19								1	1		1
Tennessee	.082	.425	0							75	0	75	4	79
Virginia	0.113	0.47	0.31		3			3	16	127	88	231	5	236
West Virginia	0.463	.0237			3			3	21	61	4	86	5	91
TOTAL	.053	.07	0.35	.09	9			9	85	613	109	807	26	833

TABLE 1A
SUMMARY OF ALL RIBES ERADICATION 1918-1938 (Inclusive)

STATE	PERCENTAGES				PER ACRE							
	ACREAGE WORKED				RIBES				MAN-DAYS			
	1st Work	2nd Work	3rd Work	4th Work	1st Work	2nd Work	3rd Work	4th Work	1st Work	2nd Work	3rd Work	4th Work
Delaware	100				0.59				0.04			
District of Columbia												
Georgia	97.8	2.2			8.3	25.0			0.031	0.22		
Kentucky	100				0.06				0.013			
Maryland	81.8	12.4	4.6	1.2	15.8	15.3	6.3	1.6	0.064	0.13	0.11	0.09
North Carolina	79.8	20.198	.002		0.55	0.212	41.0		0.012	0.011	2.22	
South Carolina	96.7	3.26	0.14		0.24	0.347	0.24		0.042	0.174	0.17	
Tennessee	99.2	0.8			8.97	39.95			0.052	0.218		
Virginia	93.6	5.4	1.0		8.0	35.9	8.1		0.093	0.39	0.24	
West Virginia	91.34	8.66			4.90	3.53			0.0528	0.489		
TOTAL	86.4	13.3	0.3		4.1	3.04	7.17	1.6	0.034	0.038	0.17	0.09

TABLE III
SUMMARY OF ALL OTHER CONTROL WORK FOR 1938

STATES	Cultivated Black Currant Eradication	NURSERY SANITATION						FEDERAL PERMIT		PREERADICATION SURVEY		TREATMENT INFECTED TREES					CHECKING					
		Number Nurseries Worked	No. white pines in Nurseries	Number Acres Worked	Number Ribes Destroyed		No. 8 hour man- days	Required	Received	No. Acres mapped w. pine and Prot. Zone	No. 8 hour man- days	No. Trees Examined	Number Trees Treated	Number Trees Removed	Number Cankers Removed	Number 8 hour man-days	Advance		Post		REGULAR	
					Wild	Culti.											Acrg. Worked	No.8 hour m-days	Acrg. Worked	No.8 hour m-days	Acreage Worked	No. 8 hour m-days
Delaware	(1)	2	2,000	2,000	-	0	(2)			1,076	280					None in 1938						
District of Columbia										1,875 (3)												
Georgia										102,294	1,582											535
Kentucky										1,090	(4)											
Maryland		1	2,000	86	924	-	38	4	4	55,364 (5)	324											32
North Carolina			701,000	400	-	40	5	-	-	382,961	4,405											12
South Carolina										3,100	4											
Tennessee		1	150,000	352	-	14	9			152,142	5,337											53
Virginia		19	264,933	5,610	32	287	25	6	5	86,421	2,000	19,395	3,795	190	27,057	440	17.	0	11			135.
West Virginia		1	256,000	571	2592	37	70	2	2	139,847	3,913						4					691
Totals		24	1,375,933	9,019	3,548	378	147	12	11	926,170	17,845	19,395	3,795	190	27,057	440	21	0	11			1,459

- (1) In Delaware 34 Ribes nigrum were pulled in WPA eradication work
(2) A total of 10 hours work was spent by Messrs. Thomas F. Mann and H. E. Yost on this work
(3) 1,427 ornamental pine trees were mapped in four days of State leader Yost's time, which is charged to supervision
(4) Work was done by R. G. Pierce and charged to District Office.
(5) Acreage surveyed in previous years was an error in last year's report

TABLE IV.
SUMMARY OF EXPENDITURES FOR 1938

State	TOTAL			RECAPITULATION					RECAPITULATION						
	Federal	State	Grand Total	Regular and Cooper- ative	By Programs (Federal Only)				Superin- tendence Including State and District leaders	By Activities (Federal and State)					All Other (Checking, Field Data & Mis)
		(Including			WPA and ERA	CCC	NYA	Total		Ribes Eradication	CBC Erad.	Nursery Sani- tation	Canker Elimi- nation	Preeradication Survey	
		All Coop. Funds)													
Delaware	1,499.98	166.20	1,666.18	60.96	1,439.02				186.23	294.92			1,118.27	64.76	
Dist. of Columbia	39.96	-	39.96	39.96	-				39.96				(2)		
Georgia	19,075.86	5,781.50	24,857.36	60.00	18,979.36		56.50	19,015.86	6,016.50	10,451.53			2,657.00	5,732.33	
Kentucky (1)									7,834.68	6,067.19		129.52	1,096.23	599.86	
Maryland	14,030.53 (2)	1,696.95	15,727.48	1,556.68	11,748.85	725.00	-	12,473.85	16,611.02	7,357.22		6.60	8,865.58	3,798.27	
North Carolina	25,004.70	11,633.99	36,638.69	52.50	24,377.72	88.50	485.98	24,952.20		60		-	20.00	-	
South Carolina	80.00	-	80.00	80.00	-		63.83	38,307.75	8,357.04	24,396.99		14.80	12,805.16	1,249.36	
Tennessee	39,391.05	7,432.30	46,823.35	1,083.30	38,243.92	-	124.75	39,546.72	27,143.67	16,631.82 (3)		265.72	891.66	3,292.99	
Virginia (3)	49,876.10	1,495.80	51,371.70	10,329.38	38,453.67	968.30		48,182.30	12,443.92	24,446.19		342.20	-	443.20	
West Virginia	48,250.50	4,066.98	52,317.48	68.20	44,122.31	4,059.99							14,641.97		
Totals	197,248.68	32,273.52	229,522.20	13,330.98	177,364.85	5,841.79	711.06	183,917.70	78,635.02	89,705.86		758.84	891.66	15,180.77	

- (1) Work by R. G. Pierce charged to Richmond Office
(2) Work by H. E. Yost charged to supervision
(3) Includes 224.30 value cultivated bushes at 10¢ and labor in destroying them.

State	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020
Alabama	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000	4,500,000	5,000,000	5,500,000	6,000,000	6,500,000
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000
Arkansas	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
California	1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000	10,000,000	11,000,000	12,000,000
Colorado	500,000	600,000	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000	1,500,000	1,600,000
Connecticut	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Delaware	100,000	120,000	140,000	160,000	180,000	200,000	220,000	240,000	260,000	280,000	300,000	320,000
District of Columbia	100,000	120,000	140,000	160,000	180,000	200,000	220,000	240,000	260,000	280,000	300,000	320,000
Florida	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000	4,500,000	5,000,000	5,500,000	6,000,000	6,500,000
Georgia	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000	1,000,000	1,100,000	1,200,000
Illinois	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000	4,500,000	5,000,000	5,500,000	6,000,000	6,500,000
Indiana	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Iowa	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Kansas	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Kentucky	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Louisiana	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Maine	100,000	120,000	140,000	160,000	180,000	200,000	220,000	240,000	260,000	280,000	300,000	320,000
Maryland	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000
Massachusetts	1,000,000	1,200,000	1,400,000	1,600,000	1,800,000	2,000,000	2,200,000	2,400,000	2,600,000	2,800,000	3,000,000	3,200,000

- [illegible]

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK	BALANCE
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930

- (1) Sent to E. J. Tamm, Chief of Bureau of Prisons
(2) Sent to E. J. Tamm, Chief of Bureau of Prisons
(3) Sent to E. J. Tamm, Chief of Bureau of Prisons
(4) Sent to E. J. Tamm, Chief of Bureau of Prisons

TABLE IA
SUMMARY OF ALL RIBES ERADICATION 1918-1938 INCLUSIVE

States	Total	Acreage	Acreage	1st Working				2nd Working				3rd Working				4th Working				Totals			
	Acreage	White	Control	Acreage Worked	No. Ribes Destroyed		No. 8	Acreage Worked	No. of Ribes Destroyed		No. 8	Acr'g Worked	No. Ribes Destroyed		No. 8	Acr'g Worked	No. Ribes Destroyed		No. 8	Acr'g Worked	No. Ribes Destroyed		No. 8
	White	Pine	Areas		Wild	Culti.	Hour		Wild	Culti.	Hour		Wild	Culti.	Hour		Wild	Culti.	Hour		Wild	Culti.	Hour
	Pine	Worth Protection	White Pine Plus Zones		Wild	Culti.	Man-Days		Wild	Culti.	Man-Days		Wild	Culti.	Man-Days		Wild	Culti.	Man-Days		Wild	Culti.	Man-Days
Delaware	100	100	1,200	1,076	4,546,543	638	43									1,076		638	43				
District of Columbia	25	25	1,875		2,095																		
Georgia	452,025	400,000	758,800	575,066	2,727,160	215,179	18,230	12,430	310,485	659	2,762					587,496		4,857,028	215,838	20,992			
Kentucky	62,244	26,394	64,230	64,230	781,025	1,830	837									64,230		2,095	1,830	837			
Maryland	83,394	77,574	207,258	171,479		3,074	10,972	25,946	397,091	1,691	3,391	9,562	60,424	405	1,069	2420	3904	7	217	209,407			
North Carolina	1,179,903	1,179,903	2,484,480	2,484,480	4,445,955	583,990	30,012	630,039	60,917	72,709	6,894	67		2746	149		3,114,586		841,942	659,445	37,055		
South Carolina	15,137	15,137	29,635	29,635	4,389,906	7,129	1,245	1,000		347	174	45		11	8		30,680		7,487		1,427		
Tennessee	450,885	380,605	551,193	512,920	2,274,556	156,538	26,847	3,732	149,122		813						516,652		4,595,077	156,538	27,660		
Virginia	233,772	233,772	601,502	549,954		50,605	51,192	31,476	1127,322	65	12,348	6,080	49,358		1,464		587,510		5,566,586	50,670	65,004		
West Virginia	238,000	218,000	600,000	466,381		11,528	24,618	44,247	156,080	8	2,163						510,628		2,430,636	11,536	26,781		
TOTAL	2,715,485	2,531,510	5,280,173	4,855,221	19,167,240	1,030,511	163,996	748,870	2,201,017	75,479	28,545	15,754	109,782	3162	2,690	2420	3904	7	217	5,622,265	21,481,943	1,109,159	195,448

TABLE IIA
SUMMARY OF ALL RIBES ERADICATION BY PROGRAMS 1918-1938 INCLUSIVE
(1st, 2nd, 3rd and 4th Workings)

	Total Acreage Worked 1st, 2nd 3rd & 4th	Regular & Cooperative				WPA & ERA				ECW				PWA or NRA				Total Emergency Program (WPA-ECW-PWA)			
		Acreage Worked	No. Ribes Destroyed		No. 8 Hour M-Days	Acreage Worked	No. Ribes Destroyed		No. 8 Hour M-Days	Acreage Worked	No. Ribes Destroyed		No. 8 Hour M-Days	Acr'g Worked	No. Ribes Destroyed		No. 8 Hour M-Days	Acreage Worked	No. of Ribes Destroyed		No. 8 Hour Man-Days
			Wild	Culti.			Wild	Culti.			Wild	Culti.			Wild	Culti.			Wild	Culti.	
Delaware	1,076			32		1,076		606	43								1,076		606	43	
Dist. of Columbia						396,308	4,852,877	194,736	20,208	15,493		235	51	175,695	4,151	20,867	733	587,496	4,857,028	215,838	20,992
Georgia	587,496					1,617								61,523	2,095	1,830	837	63,140	2,095	1,830	837
Kentucky	64,230	1,090				70,474(1)	1,432,655	2,587	9,835	9,067	406,845	12	1,851	127,436	1190,850	2,529	3589	206,977	3,030,350	5,128	15,275
Maryland	209,407	2,430(1)	158,229	49	374	70,474(1)	1,432,655	2,587	9,835	9,067	406,845	12	1,851	127,436	1190,850	2,529	3589	206,977	3,030,350	5,128	15,275
North Carolina	3,114,586	53,412	10,202	4,561	273	1,990,274	806,372	520,243	31,098	165,717	1,527	7,606	1,733	905,183	23,841	127,035	3951	3,061,174	831,740	654,884	36,782
South Carolina	30,680	3,145		12	12	4,050		556	596	888			21	22,597		6,919	798	27,535		7,475	1,415
Tennessee	516,652					370,956	4,317,291	154,480	25,487	23,356	111,091	144	734	122,340	166,605	1,914	1439	516,652	4,595,077	156,538	27,660
Virginia	587,510	10,256	60,244	2	138	393,170	2,895,052	29,410	37,344	59,684	1891,242	31	22,051	124,400	720,048	21,227	5471	577,254	5,506,342	50,668	64,866
West Virginia	510,628	3,970	22,844		244	405,254	1,574,552	6,704	17,540	55,359	492,209	129	6,587	46,045	341,031	4,703	2410	506,658	2,407,792	11,536	26,537
TOTAL	5,622,265	74,303	251,519	4656	1,041	3,633,179	15,878,799	909,322	142,151	329,564	2902,914	8,157	33,028	1,585,219	2448,711	187,024	19,228	5547,962	21,230,424	1,104,503	194,407

(1) 465 Acres of ERA transferred from WPA where placed last year to Regular together with Ribes and man-days.

TABLE III A.
SUMMARY OF ALL OTHER CONTROL WORK, 1918-1938 (INCLUSIVE)

State	CULTIVATED BLACK CURRANT ERADICATION					PREERADICATION SURVEY		TREATMENT INFECTED WHITE PINE				
	Number	Number	Number	Ribes	Number	No. Acres Mapped	Number 8	Number	Number	Number	Number	Number 8 hour
	Inspections Made	Locations Found	Destroyed B. C.	Other	8 hour man-days	white pine and protection Zones	hour man-days	Trees examined	Trees Treated	Trees Removed	Cankers Removed	man-days
Delaware	0	0	0-(1)	0	0	1,076	280					
District of Columbia	0	0	0	0	-0	1,875	(21)					
Georgia	19	19	1126	0	20	746,925	4,365					
Kentucky	0	0	0	0	0	64,230	(2)					
Maryland	25	25	2211	0	no data	207,258	1,555	83,258	3,656	103	11,517	623
North Carolina	2	2	3	0	0.25	2,251,267	12,545	0	0	0	0	-
South Carolina	0	0	0	0	0	29,635	(3) 4	0	0	0	0	0
Tennessee	0	0	0	0	0	672,429	10,952					
Virginia	24	24	12	0	0.25	609,374	9,670	38,786	6,745	598	42,725	928
West Virginia	1	1	0	0	0.5	525,670	13,059	-	-	-	-	-
	71	71	3352	0	21.0	5,109,739	52,430	122,044	10,401	701	54,242	1,551

(1) 34 European Black Currants destroyed in New Castle County on Regular Eradication work.

(2) Work done largely by Agent

(3) Work in 1934 and 1935 was given under Ribes Eradication.

TABLE IV A.
SUMMARY OF ALL EXPENDITURES, 1918-1938 (Inclusive)

State	TOTAL			RECAPITULATION - By Programs (Federal only)					RECAPITULATION - By Activities (Federal and State)						
	Federal	STATE (Incl. All Coop. Funds)	GRAND TOTAL	Regular and Coop.	WPA CWA and ER ¹	ECW	P. W. A.	Total Emergency Programs	Supervision (Incl. State & Dist. Leaders)	Ribes Eradication	C.B.C. Eradication	Nursery Sanitation	Canker Elimination	Preeradication Survey	All other (Checking, Field Data & Misc.)
Delaware	1,525.78	166.20	1,691.98	86.76	1,439.02			1,439.02	214.03	294.92				1,118.27	64.76
Dist of Col.	39.96	0	39.96	39.76	-			-	39.96					(1)	
Georgia	78,899.40	14,076.69	92,976.09	101.27	71,172.94	281.66	7,343.53	78,798.13	19,372.79	44,915.01	65.00	3.20		15,846.78	12,773.31
Kentucky	7,727.41	290.00	8,017.41	1,487.63	-		6,239.78	6,239.78	2,847.26	4,345.24					824.91
Maryland	85,234.53	6,968.95	92,203.48	7,757.33	53,320.29	1,998.00	22,165.91	77,484.20	35,712.27	45,707.04	-	560.22	1,760.66	5,778.13	2,685.16
North Carolina	170,303.38	27,957.89	198,261.27	3,357.94	133,991.99	5,646.35	27,307.10	166,945.44	45,675.90	99,009.64	1.00	337.46	-	30,093.27	23,144.00
South Carolina	7,811.40	610.00	8,421.40	80.00	1,876.91	43.04	5,811.45	7,731.40	666.24	7,450.16				20.00	285.00
Tennessee	111,732.33	17,026.70	128,759.03	2,503.68	94,487.66	1,860.87	12,871.12	109,219.65	32,084.44	60,323.47	0	25.14		25,554.38	10,762.60
Virginia	247,884.35	5,721.29	253,605.64	24,890.79	139,263.63	48,146.44	35,583.49	222,993.56	82,541.88	133,434.00(2)	1.00	967.89	1,882.60	30,781.53	3,976.74
West Virginia	176,598.22	8,429.11	185,027.33	6,103.76	137,625.68	15,003.28	17,865.50	170,494.46	40,835.66	88,171.19	2.00	3,110.96	0	52,334.62	572.90
	887,747.76	81,246.83	968,994.59	46,402.12	633,178.12	72,979.64	135,187.88	841,345.64	259,990.43	483,650.67	69.00	5,024.87	3,643.26	161,526.98	55,089.38

(1) Survey work carried on by Mr. Yost, but charged to supervision

(2) Includes expenditures of District Office at Richmond, Va.

State	Number of Inhabitants	Number of Inhabitants under 16 years of age	Number of Inhabitants over 16 years of age	Number of Inhabitants under 16 years of age	Number of Inhabitants over 16 years of age
Alabama	1,500,000	400,000	1,100,000	400,000	1,100,000
Arkansas	1,000,000	250,000	750,000	250,000	750,000
California	2,000,000	500,000	1,500,000	500,000	1,500,000
Colorado	1,000,000	250,000	750,000	250,000	750,000
Connecticut	1,000,000	250,000	750,000	250,000	750,000
Delaware	1,000,000	250,000	750,000	250,000	750,000
Florida	1,000,000	250,000	750,000	250,000	750,000
Georgia	1,000,000	250,000	750,000	250,000	750,000
Idaho	1,000,000	250,000	750,000	250,000	750,000
Illinois	1,000,000	250,000	750,000	250,000	750,000
Indiana	1,000,000	250,000	750,000	250,000	750,000
Iowa	1,000,000	250,000	750,000	250,000	750,000
Kansas	1,000,000	250,000	750,000	250,000	750,000
Kentucky	1,000,000	250,000	750,000	250,000	750,000
Louisiana	1,000,000	250,000	750,000	250,000	750,000
Maine	1,000,000	250,000	750,000	250,000	750,000
Maryland	1,000,000	250,000	750,000	250,000	750,000
Massachusetts	1,000,000	250,000	750,000	250,000	750,000
Michigan	1,000,000	250,000	750,000	250,000	750,000
Minnesota	1,000,000	250,000	750,000	250,000	750,000
Mississippi	1,000,000	250,000	750,000	250,000	750,000
Missouri	1,000,000	250,000	750,000	250,000	750,000
Montana	1,000,000	250,000	750,000	250,000	750,000
Nebraska	1,000,000	250,000	750,000	250,000	750,000
Nevada	1,000,000	250,000	750,000	250,000	750,000
New Hampshire	1,000,000	250,000	750,000	250,000	750,000
New Jersey	1,000,000	250,000	750,000	250,000	750,000
New Mexico	1,000,000	250,000	750,000	250,000	750,000
New York	1,000,000	250,000	750,000	250,000	750,000
North Carolina	1,000,000	250,000	750,000	250,000	750,000
North Dakota	1,000,000	250,000	750,000	250,000	750,000
Ohio	1,000,000	250,000	750,000	250,000	750,000
Oklahoma	1,000,000	250,000	750,000	250,000	750,000
Oregon	1,000,000	250,000	750,000	250,000	750,000
Pennsylvania	1,000,000	250,000	750,000	250,000	750,000
Rhode Island	1,000,000	250,000	750,000	250,000	750,000
South Carolina	1,000,000	250,000	750,000	250,000	750,000
South Dakota	1,000,000	250,000	750,000	250,000	750,000
Tennessee	1,000,000	250,000	750,000	250,000	750,000
Texas	1,000,000	250,000	750,000	250,000	750,000
Utah	1,000,000	250,000	750,000	250,000	750,000
Vermont	1,000,000	250,000	750,000	250,000	750,000
Virginia	1,000,000	250,000	750,000	250,000	750,000
Washington	1,000,000	250,000	750,000	250,000	750,000
West Virginia	1,000,000	250,000	750,000	250,000	750,000
Wisconsin	1,000,000	250,000	750,000	250,000	750,000
Wyoming	1,000,000	250,000	750,000	250,000	750,000

(1) The number of inhabitants in each State is given in the column headed "Number of Inhabitants".
 (2) The number of inhabitants under 16 years of age in each State is given in the column headed "Number of Inhabitants under 16 years of age".
 (3) The number of inhabitants over 16 years of age in each State is given in the column headed "Number of Inhabitants over 16 years of age".

State	Number of Inhabitants	Number of Inhabitants under 16 years of age	Number of Inhabitants over 16 years of age	Number of Inhabitants under 16 years of age	Number of Inhabitants over 16 years of age
Alabama	1,500,000	400,000	1,100,000	400,000	1,100,000
Arkansas	1,000,000	250,000	750,000	250,000	750,000
California	2,000,000	500,000	1,500,000	500,000	1,500,000
Colorado	1,000,000	250,000	750,000	250,000	750,000
Connecticut	1,000,000	250,000	750,000	250,000	750,000
Delaware	1,000,000	250,000	750,000	250,000	750,000
Florida	1,000,000	250,000	750,000	250,000	750,000
Georgia	1,000,000	250,000	750,000	250,000	750,000
Idaho	1,000,000	250,000	750,000	250,000	750,000
Illinois	1,000,000	250,000	750,000	250,000	750,000
Indiana	1,000,000	250,000	750,000	250,000	750,000
Iowa	1,000,000	250,000	750,000	250,000	750,000
Kansas	1,000,000	250,000	750,000	250,000	750,000
Kentucky	1,000,000	250,000	750,000	250,000	750,000
Louisiana	1,000,000	250,000	750,000	250,000	750,000
Maine	1,000,000	250,000	750,000	250,000	750,000
Maryland	1,000,000	250,000	750,000	250,000	750,000
Massachusetts	1,000,000	250,000	750,000	250,000	750,000
Michigan	1,000,000	250,000	750,000	250,000	750,000
Minnesota	1,000,000	250,000	750,000	250,000	750,000
Mississippi	1,000,000	250,000	750,000	250,000	750,000
Missouri	1,000,000	250,000	750,000	250,000	750,000
Montana	1,000,000	250,000	750,000	250,000	750,000
Nebraska	1,000,000	250,000	750,000	250,000	750,000
Nevada	1,000,000	250,000	750,000	250,000	750,000
New Hampshire	1,000,000	250,000	750,000	250,000	750,000
New Jersey	1,000,000	250,000	750,000	250,000	750,000
New Mexico	1,000,000	250,000	750,000	250,000	750,000
New York	1,000,000	250,000	750,000	250,000	750,000
North Carolina	1,000,000	250,000	750,000	250,000	750,000
North Dakota	1,000,000	250,000	750,000	250,000	750,000
Ohio	1,000,000	250,000	750,000	250,000	750,000
Oklahoma	1,000,000	250,000	750,000	250,000	750,000
Oregon	1,000,000	250,000	750,000	250,000	750,000
Pennsylvania	1,000,000	250,000	750,000	250,000	750,000
Rhode Island	1,000,000	250,000	750,000	250,000	750,000
South Carolina	1,000,000	250,000	750,000	250,000	750,000
South Dakota	1,000,000	250,000	750,000	250,000	750,000
Tennessee	1,000,000	250,000	750,000	250,000	750,000
Texas	1,000,000	250,000	750,000	250,000	750,000
Utah	1,000,000	250,000	750,000	250,000	750,000
Vermont	1,000,000	250,000	750,000	250,000	750,000
Virginia	1,000,000	250,000	750,000	250,000	750,000
Washington	1,000,000	250,000	750,000	250,000	750,000
West Virginia	1,000,000	250,000	750,000	250,000	750,000
Wisconsin	1,000,000	250,000	750,000	250,000	750,000
Wyoming	1,000,000	250,000	750,000	250,000	750,000

(1) The number of inhabitants in each State is given in the column headed "Number of Inhabitants".
 (2) The number of inhabitants under 16 years of age in each State is given in the column headed "Number of Inhabitants under 16 years of age".
 (3) The number of inhabitants over 16 years of age in each State is given in the column headed "Number of Inhabitants over 16 years of age".

P E R S O N N E L

PERSONNEL

The following technical, supervisory and clerical personnel were under appointment in the calendar year 1938. (1) Great credit is due the field personnel for the work accomplished in their respective States and Districts.

Georgia

W. V. Zimmer, State Leader - Originally appointed	5/2/34
Carl J. Brookshire, Agent - appointed first	3/16/36
appointment terminated	1/24/38
Thomas M. Corn, Agent	" 8/22/35

Maryland

Henry E. Yost, State leader-	appointed	9/13/33
Ernest H. Porter, Agent, originally	"	5/16/34
furloughed		11/30/38

North Carolina

Hillary B. Teague, State leader, appointed agent	5/1/34
Oscar V. Coulter, agent	" 8/10/36
Mark M. Ferguson	" 5/12/36
Hobart A. Whitman (2)	" 5/13/36
originally	" 7/27/34
collaborator without compensation since	1/1/38
Martin L. Nesbitt (2) collaborator without	
compensation	5/21/38
appointment terminated	8/29/38
Alphonzo C. Reynolds, (2) collaborator	5/2/38
appointment terminated	7/15/38

Notes:

- (1) Date shown in last column is the date they entered on duty.
- (2) On State pay as blister rust control agents, working in same capacity as if paid by Federal Government.

Tennessee

Radford D. Tanksley, State leader,	Appointed	9/24/36
John W. Lane, Agent	"	5/25/36
Otis E. Skiles, "	"	5/17/37
Pete Stegall	"	5/17/34

VirginiaRichmond Office

Roy G. Pierce, Pathologist, Original appointment 7/1/1908

James Curtis Ball, Agent, appointed first 1933

Harry K. Cooper, Principal Clerk, appointed 5/22/35
War Department

Mrs. Minnie C. Hudgins, Assistant clerk-stenographer
appointed 12/21/35

Leo A. Placek, Chief Clerk " (BRC) 8/16/35
appointment terminated 10/26/38

Charlottesville Office

John G. Luce, Jr., State leader, appointed 5/21/34

George C. Cramer, agent " 2/4/35

William M. Early, Jr., agent " 5/21/34

Herbert E. Hamric agent " 3/16/37

Richard G. Hopper, agent resigned 11/4/37

appointed 12/3/37

furloughed 7/14/38

terminated 11/30/38

West Virginia

Dr. Joseph M. Ashcroft, State leader, appointed 5/12/34

George C. Hamilton, agent 6/18/34

Kermit McKeever " 9/5/36

Alfred E. McNeel, agent, appointed first 9/5/36

collaborator without com- 1/1/38

pensation - resigned 12/17/38

Ralph W. Welch, agent - appointed 5/12/34

The success of our work in the field whether it be eradication work, or pine survey or treatment of infected trees depends largely on the foremen, who are either "Professional or Skilled" men. Acknowledgment is here given to them and their names are listed below under State and County.

Delaware

Bernard Pufahl

Grade Professional

South Carolina

James M. Mann

Agent

PERSONNEL (Continued)

Foreman Calendar Year 1938

Georgia

<u>County</u>	<u>Name</u>	<u>Grade</u> (Skilled or professional)
Gilmer	Lester M. Davis	Skilled
"	Truman T. Holt	"
Murray	Fields K. McKinnish	Skilled
Lumpkin	Car J. Brookshire	Professional

Maryland

Baltimore	Stanley H. Hillock	Skilled
Garrett	Fred Trickett	"
"	Harry Murphy	"

North Carolina

Buncombe	Charles B. Hampton	"
"	James E. Brookshire	"
"	Delbert C. Stoner	"
Burke	Paul E. Giles	"
"	John V. Shull	"
"	George P. Mayhue	"
Cherokee	Dee N. Moore	"
Haywood	Carson W. Swanger	"
"	Pink T. Messer	"
Graham	Grady M. George	"
Jackson	John M. Parris	"
"	William B. Crawford	"
"	James L. Henson	"
Macon	Edgar H. Scroggs	"
"	Claude M. Ledford	"
Madison	Roy Plemmons	"
McDowell	Obie Webb	"
Mitchell	Jeter Grindstaff	"
"	Anson G. Wiseman, Jr.,	"
Swain	Alfred F. Lackey	"
Yancey	Carl C. Ray	"
"	James Garland	"
"	Charles M. Holcombe	"

Tennessee

Carter	Rhudy A. Fortner	"
"	Arthur Wilson	"
Cumberland	Joe H. Wilson	"
Morgan	Cecil Hawn	"
Carter	David C. Kidd	"

PERSONNEL (Continued)

Foreman

Calendar Year 1938

Virginia

<u>County</u>	<u>Name</u>	<u>Grade</u>
Madison	Douglas D. Withers	Professional
Grayson	Edgar W. Farmer (1)	"
Highland	Cam A. Crummett	Skilled
"	Obie F. Simmons	"
Rockingham	Bernie R. Vaughan	"
"	Martin Q. Miller	"
Smyth	Gilmore C. Brown	"
"	Lawrence I. Hamric	Professional
"	John Hayes	Skilled
"	Ambrose Greer	"

West Virginia

Greenbrier	Ross A. Pate	Skilled
"	Walter C. Reed	"
"	Harold W. Watson	"
Monroe	Robert G. Humphries	"
"	Forrest A. Dunbar	"
Mercer	Thomas J. Lilly	"
"	Elmer Gwynee	"
Pendleton	Marlin I. Keister	"
"	Richard R. Mitchell	"
Raleigh	Archie D. Pack	"
"	Herschel C. Rakes	"

(1) On March 23, 1939, Mr. Farmer was dismissed from the work, because of "falsifying payroll and unauthorized use of Government truck."

SOUTHERN APPALACHIAN STATES

NUMBER OF TOURS WORKED BY WPA RELIEF WORKERS

In Calendar Year 1938

Month	Delaware	Georgia	Maryland	North Carolina	Tennessee	Virginia	West Virginia
January		4,973	1,292	10,204	10,420	13,534	7,137
February		5,318	1,262	6,412	12,213	11,999	7,241
March		5,199	1,154	5,268	14,830	10,070	7,211
April		5,490	1,872	5,358	14,590	10,397	5,558
May		5,494	2,122	4,860	12,472	8,754	5,959
June		6,927	1,940	4,536	9,131	6,606.5	6,233
July		5,607	2,143	2,765	9,426	6,426	5,772
August	300	5,221	2,142	3,914	9,134	7,045.5	6,313
September	300	5,016	2,135	6,407	9,083	8,623.5	6,503
October	600	4,611	2,159	4,724	9,127	7,802	6,482
November	600	3,989	2,036	4,800	8,936	6,988	5,654
December	600	4,117	1,460	4,198	9,254.4	8,070	4,704
Total	2700	61,962	21,767	63,446	128,676.4	106,315.4	74,767

Compiled by M. C. Higgins

P E R S O N N E L

STATE MATHEMATICS ACCOUNT

RECEIVED FROM THE STATE OF NEW YORK TO THE STATE

DEPT. OF THE TREASURY

DATE	DESCRIPTION	AMOUNT	DATE	DESCRIPTION	AMOUNT	DATE	DESCRIPTION	AMOUNT	DATE	DESCRIPTION	AMOUNT
1901	RECEIVED	100.00	1902	RECEIVED	100.00	1903	RECEIVED	100.00	1904	RECEIVED	100.00
1905	RECEIVED	100.00	1906	RECEIVED	100.00	1907	RECEIVED	100.00	1908	RECEIVED	100.00
1909	RECEIVED	100.00	1910	RECEIVED	100.00	1911	RECEIVED	100.00	1912	RECEIVED	100.00
1913	RECEIVED	100.00	1914	RECEIVED	100.00	1915	RECEIVED	100.00	1916	RECEIVED	100.00
1917	RECEIVED	100.00	1918	RECEIVED	100.00	1919	RECEIVED	100.00	1920	RECEIVED	100.00
1921	RECEIVED	100.00	1922	RECEIVED	100.00	1923	RECEIVED	100.00	1924	RECEIVED	100.00
1925	RECEIVED	100.00	1926	RECEIVED	100.00	1927	RECEIVED	100.00	1928	RECEIVED	100.00
1929	RECEIVED	100.00	1930	RECEIVED	100.00	1931	RECEIVED	100.00	1932	RECEIVED	100.00
1933	RECEIVED	100.00	1934	RECEIVED	100.00	1935	RECEIVED	100.00	1936	RECEIVED	100.00
1937	RECEIVED	100.00	1938	RECEIVED	100.00	1939	RECEIVED	100.00	1940	RECEIVED	100.00
1941	RECEIVED	100.00	1942	RECEIVED	100.00	1943	RECEIVED	100.00	1944	RECEIVED	100.00
1945	RECEIVED	100.00	1946	RECEIVED	100.00	1947	RECEIVED	100.00	1948	RECEIVED	100.00
1949	RECEIVED	100.00	1950	RECEIVED	100.00	1951	RECEIVED	100.00	1952	RECEIVED	100.00
1953	RECEIVED	100.00	1954	RECEIVED	100.00	1955	RECEIVED	100.00	1956	RECEIVED	100.00
1957	RECEIVED	100.00	1958	RECEIVED	100.00	1959	RECEIVED	100.00	1960	RECEIVED	100.00
1961	RECEIVED	100.00	1962	RECEIVED	100.00	1963	RECEIVED	100.00	1964	RECEIVED	100.00
1965	RECEIVED	100.00	1966	RECEIVED	100.00	1967	RECEIVED	100.00	1968	RECEIVED	100.00
1969	RECEIVED	100.00	1970	RECEIVED	100.00	1971	RECEIVED	100.00	1972	RECEIVED	100.00
1973	RECEIVED	100.00	1974	RECEIVED	100.00	1975	RECEIVED	100.00	1976	RECEIVED	100.00
1977	RECEIVED	100.00	1978	RECEIVED	100.00	1979	RECEIVED	100.00	1980	RECEIVED	100.00
1981	RECEIVED	100.00	1982	RECEIVED	100.00	1983	RECEIVED	100.00	1984	RECEIVED	100.00
1985	RECEIVED	100.00	1986	RECEIVED	100.00	1987	RECEIVED	100.00	1988	RECEIVED	100.00
1989	RECEIVED	100.00	1990	RECEIVED	100.00	1991	RECEIVED	100.00	1992	RECEIVED	100.00
1993	RECEIVED	100.00	1994	RECEIVED	100.00	1995	RECEIVED	100.00	1996	RECEIVED	100.00
1997	RECEIVED	100.00	1998	RECEIVED	100.00	1999	RECEIVED	100.00	2000	RECEIVED	100.00

RECEIVED FROM THE STATE OF NEW YORK TO THE STATE

SUMMARY OF ACCIDENTS OCCURRING TO OUR PERSONNEL IN 1938

STATE	NAME OF INJURED EMPLOYEE	NATURE OF INJURY	STATEMENT OF COMPENSABLE TIME LOST	REPORTED TO U. S. EMPLOYEES' COMPENSATION COMMISSION
<u>GEORGIA</u>				
	Thomas Elrod, Jr.	Deep cut on right shin	No time lost	Yes
	Thomas Elrod, Jr.	Poisonous snake bite	" " "	Yes
<u>MARYLAND</u>				
	Everett F. Hershman	Minor skin injury re- sulting in infection	No compensable time lost	Yes
<u>NORTH CAROLINA</u>				
	William E. Hyatt	Eye injury	No compensable time lost	Yes
	Charles Tipton	Bruised from sliding rock	Not out more than two days	Yes
<u>TENNESSEE</u>				
	Maynard Campbell	Bruised chest	Did not stop work	Yes
	Charles Sims	Bruised chest	Claim allowed for 4 days	Yes
	David C. Kidd	Shoulder injury	Did not stop work	Yes
	Dana W. Huskins	Spider bite	Out for five days	Yes
<u>VIRGINIA</u>				
	John Hayes	Hand infection	Did not stop work	Yes
	Charles Childress	Severe leg injury	Claim allowed for 12 days	Yes
	Leroy Siever	Minor injury	Did not stop work	No
	Levi M. Dove	" "	" " " "	No
	Robert J. Kimball	" "	" " " "	No
	Jessie R. Norman	Thumb injury	" " " "	Yes
<u>WEST VIRGINIA</u>				
	Denver R. Bennett	Injury to hand	No time lost	Yes
	Walter C. Reed	Eye injury	" " "	Yes

Total number of cases reported to U. S. Employees' Compensation Commission - - - - - 14

NAME	ADDRESS	DATE
JOHN HAYES	1000 12th St. N.W.	1877
CHARLES CHILDS	1000 12th St. N.W.	1877
JERRY BLISS	1000 12th St. N.W.	1877
LESLIE E. BROWN	1000 12th St. N.W.	1877
JOHN HAYES	1000 12th St. N.W.	1877
CHARLES CHILDS	1000 12th St. N.W.	1877
JERRY BLISS	1000 12th St. N.W.	1877
LESLIE E. BROWN	1000 12th St. N.W.	1877
JOHN HAYES	1000 12th St. N.W.	1877
CHARLES CHILDS	1000 12th St. N.W.	1877
JERRY BLISS	1000 12th St. N.W.	1877
LESLIE E. BROWN	1000 12th St. N.W.	1877

total number of cases reported to U.S. Public Health Service

Location of Blister Rust Control Work In
Southern Appalachian States in 1938,
by Project, State, County and Activity

WPA Project

DELAWARE

Local Control - Kent, New Castle and Sussex Counties

Other Activities - Kent, New Castle and Sussex Counties

Office - New Castle County

GEORGIA

Local Control - Fannin, Gilmer, Murray and Pickens Counties

Other Activities - Georgia and Murray Counties

Office - Lumpkin County

MARYLAND

Local Control - Garrett County

Other Activities - Allegany, Anne Arundel, Baltimore, Carroll, Cecil, Frederick, Garrett, Harford, Howard, Kent, Montgomery, Prince George and Washington Counties.

Office - Allegany County

NORTH CAROLINA

Local Control - Buncombe, Burke, Caldwell, Cherokee, Clay, Graham, Haywood, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Swain, Transylvania and Yancey Counties.

Other Activities - Same as for Local Control

Office - Buncombe County

TENNESSEE

Local Control - Carter, Cumberland, Fentress, Scott, Sullivan and Unicoi Counties.

Other Activities - Carter, Cumberland, Bledsoe, Fentress, Johnson, Pickett, Scott, Sullivan and Unicoi Counties.

Office - Knox County

by Project, Area, County and Activity
Southern Appalachian States in 1938,
Division of Motor Fuel Control, Inc. in
Division of Motor Fuel Control, Inc. in

605017 12W

Office - New Seattle County
Other Available - Fort, New Seattle and Mason Counties
Local Control - Kent, New Seattle and Mason Counties

Other Activities - Georgia and Shire Counties
 Office - Memphis County
 Local Control - Various, Olney, Murray and Shire Counties

Office - Allegany County

Local Control - Burcombe, Burke, Caldwell, Davidson, Day,
Graham, Haywood, Jackson, Mason, Nelson,
Belmont, Caldwell, Folk, Wells, Wynn, and
and Yancy Counties.

Office - Gloucester County
County Jail - Gloucester

Local Council - District Council
and District Council

[illegible]

Location of Blister Rust Control Work in
Southern Appalachian States in 1938,

by Project, State, County and Activities

Virginia

Local Control - Allegheny, Augusta, Bath, Frederick,
Grayson, Highland, Madison, Page,
Patrick, Rockingham, Shenandoah, Smyth
and Wythe Counties.

Other Activities Albemarle, Allegheny, Amherst, Arlington, Augusta, Bath, Campbell, Carroll, Creig, Fairfax, Frederick, Botetourt, Grayson, Hanover, Henrico, Highland, Madison, Page, Patrick, Pitsylvania, Rockingham, Roanoke, Rockbridge, Shenandoah, Smyth, Warren, Washington, and Wythe Counties.

Office - Albemarle, Grayson, Madison and Henrico Counties

West Virginia

Local Control - Greenbrier, Hardy, Monroe, Pendleton and Raleigh Counties

Other Activities - Greenbrier, Hardy, Monroe, Mercer,
Pendleton and Raleigh Counties

Office - Pocahontas County

location of higher level County work in
Southern Appalachian States in 1958,
by Project, State, County and Activities

WPA Project

Virginia

Local Control - Albemarle, Arlington, Loudoun, Fairfax,
Stafford, Shenandoah, Rockingham, Loudoun, Loudoun,
and other counties.

Other Activities - Albemarle, Arlington, Loudoun, Loudoun,
Stafford, Shenandoah, Rockingham, Loudoun, Loudoun,
and other counties.

Office - Albemarle, Loudoun and Loudoun Counties

West Virginia

Local Control - Greenbrier, Putnam, Boone, Randolph and
other counties.

Other Activities - Greenbrier, Putnam, Boone, Randolph,
and other counties.

Office - Greenbrier County

REGULAR PROJECT

Including State and Local Cooperation

DELAWARE

Local Control -

Other Activities - Kent, New Castle and Sussex Counties

DISTRICT OF COLUMBIA

Other Activities - D. of C.

GEORGIA

Local Control -

Other Activities - Murray and Gilmer Counties

KENTUCKY

Local Control - Christian, Grant, Hardin, Henry, Hopkins, Meade, Ohio, Pendleton, Union and Webster Counties.

Other Activities - Same as for Local Control

MARYLAND

Local Control * Allegany, Anne Arundel, Frederick, Harford and Howard Counties

NORTH CAROLINA

Local Control - Avery, Burke, Caldwell, Cherokee, Graham, Haywood, Jackson, Macon, McDowell, Mitchell, Transylvania and Yancey Counties

Other Activities - Buncombe, Caldwell, Cherokee, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Transylvania and Yancey Counties.

Office Buncombe County

REPUBLICAN PARTY

Including State and Local Cooperation

DELAWARE

Local Control -

Other Activities - Kent, New Castle and Sussex Counties

DISTRICT OF COLUMBIA

Other Activities - D. C.

GEORGIA

Local Control -

Other Activities - Murray and Wilkes Counties

KENTUCKY

Local Control - Carlisle, Grant, Harlan, Henry, Hopkins, Meade, Ohio, Todd, Union and Webster Counties.

Other Activities - Same as the Local Control

MASSACHUSETTS

Local Control - Albany, Andover, Bedford, Barnstable and Dukes Counties

NORTH CAROLINA

Local Control - Avery, Burke, Caldwell, Cherokee, Graham, Haywood, Jackson, Madison, McDowell, Mitchell, Transylvania and Yancey Counties

Other Activities - Buncombe, Caldwell, Cherokee, Graham, Haywood, Jackson, Madison, McDowell, Mitchell, Transylvania and Yancey Counties

Other - Buncombe County

REGULAR PROJECT

Including State and Local Cooperation

Georgia

Local Control - Albany and Carroll Counties

SOUTH CAROLINA

Local Control * Oconee, and Pickens Counties

Other Activities - Oconee and Pickens Counties

Florida

Tennessee - Putnam and Sevier Counties

Other Activities - Madison and Rhea Counties

VIRGINIA

Local Control - Augusta, Greene, Madison, Rockbridge, Rockingham and Wythe Counties

Other Activities Greene, Rockingham and Wythe Counties

Office Albemarle, Henrico and Madison Counties

WEST VIRGINIA

Local Control - Pendleton County

Other Activities - Greenbrier and Monroe Counties

Office - Pocahontas County

Mississippi

Office - Jackson and Calhoun Counties

Alabama

Office - Montgomery and Macon Counties

REGULAR PROJECT

Including State and Local Cooperation

South Carolina

Office - Greenville - 1000 North Main Street

South Carolina

Local Control - Oconee, and Pickens Counties

Other Activities - Oconee and Pickens Counties

Tennessee

VIRGINIA

Local Control - Albemarle, Greene, Madison, and Wythe Counties

Other Activities - Albemarle, Greene, Madison, and Wythe Counties

Office - Albemarle, Greene, and Madison Counties

WEST VIRGINIA

Local Control - Randolph County

Other Activities - Randolph County

Office - Randolph County

CCC PROJECT

Maryland

Local Control * Allegany and Garrett Counties

North Carolina

Other Activities - Madison County

Virginia

Local Control - Page and Rappahannock Counties

Other Activities - Madison and Page Counties

West Virginia

Local Control - Greenbrier, Raleigh and Tucker Counties

NYA Project

Georgia

Office - Lumpkin

North Carolina

Office - Buncombe, Haywood, Jackson, Macon and Mitchell Counties

Tennessee

Office - Carter and Unicoi Counties

Virginia

Office - Albemarle and Henrico Counties

DOE 5 H O J E C 2

DOE 5 H O J E C 2

Alabama

Local Control - Alabama and District Committee

North Carolina

Other Activities - Madison County

Virginia

Local Control - Page and Department Committee

Other Activities - Madison and Page Committee

West Virginia

Local Control - Greenbrier, Raleigh and Jackson Committee

North Carolina

Other Activities - Madison and Page Committee

Georgia

Local Control - Jackson

Other Activities - Madison and Page Committee

North Carolina

Office - Hancock, Haywood, Jackson, Mason and Mitchell Committee

Tennessee

Office - Carter and United Committee

Virginia

Office - Albemarle and Madison Committee

EXPENDITURES

Expenditures for blister rust control for the Southern Appalachian States for calendar year 1938 were from two general sources, Federal and non-Federal. The Federal monies were from several appropriations.

Under the Regular appropriations to the Department there was allotted July 1, 1937, \$9,000.00 for the fiscal year 1938. Of this \$2,081.83 was expended in 1937 and \$6,914.39 was expended in 1938 from January 1 to June 30. The total expenditure for the fiscal year amounted to \$8,996.22.

Allotments were made to the various States under WPA Appropriations 501082 for the fiscal year 1938 and from appropriation 701082 for the fiscal year 1939. A resume of the expenditures from these appropriations is found in following table.

Resume of Expenditures for Southern Appalachian States by Appropriation, and Half Year Period.

	501082 January June 1938	701082 July 1 December 31, 1938	Total 501082 701082	Total Reported in Table IV Omnibus Table WPA and ERA
Delaware		\$ 1,297.08		\$ 1,439.02
Georgia	\$ 9,465.82	9,523.65	\$18,989.47	18,979.36
Maryland	5,208.21	6,481.97	11,690.18	11,748.85
North Carolina	13,818.78	10,391.59	24,210.37	24,377.72
Tennessee	22,592.95	14,823.27	37,416.22	38,243.92
Virginia	17,662.32	14,430.82	32,093.14)	38,453.67
Va. Adm. Expenses	48.52	1,525.81	1,574.33)	
West Virginia	23,368.06	20,524.10	43,892.16	44,122.31
Total	\$92,164.66	\$78,998.29	\$169,865.85	\$177,364.85

Additional expenditures were made from Appropriation 501009 for administrative purposes for the Richmond Office beginning July 1, 1937. There was expended \$2,751.40 in the calendar year 1937 and \$48.52 in the calendar year 1938 from January 1, to June 30.

Under Appropriation 701009 and 701089 \$7,247 for administrative purposes for the Richmond Office was made available for fiscal year 1939.

Appropriations for fiscal year 1957 were \$1,000,000. The total amount was \$1,000,000. The total amount was \$1,000,000. The total amount was \$1,000,000.

Under the regular appropriations to the Department of State was allocated July 1, 1957, \$1,000,000 for the fiscal year 1958. Of this \$1,000,000 was expended in 1957 and \$1,000,000 was expended in 1958 from January 1 to June 30. The total amount for the fiscal year amounted to \$1,000,000.

Allocations were made to the various States under the Department of State for the fiscal year 1958 and from appropriations for the fiscal year 1957. A summary of the expenditures from these appropriations is found in following table.

Summary of Appropriations for Economic Development States by Appropriation, and Half Year Period.

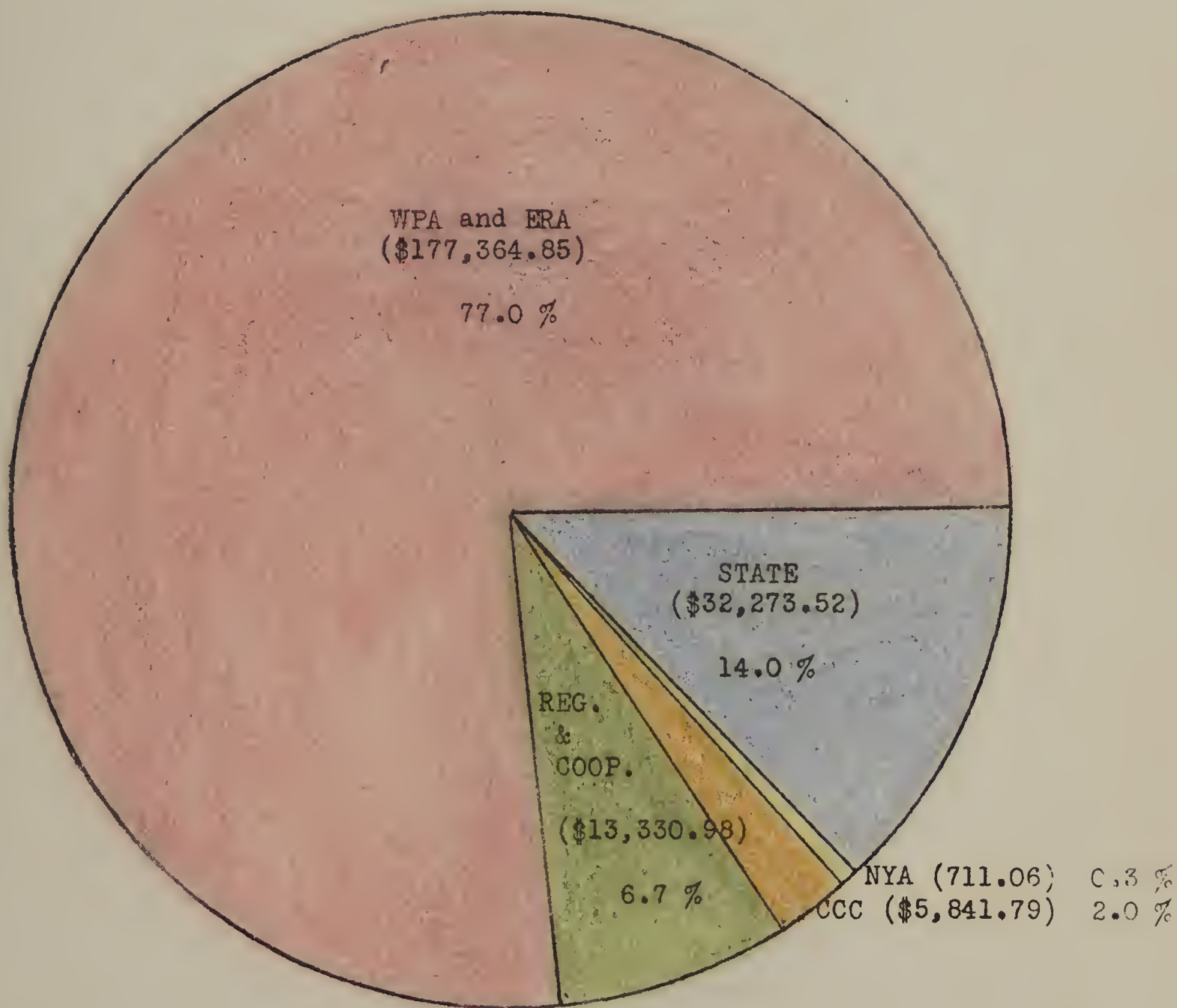
Country	July 1, 1957	January 1, 1958	Total
Algeria	1,257.00	1,257.00	2,514.00
Angola	2,514.00	2,514.00	5,028.00
Argentina	2,514.00	2,514.00	5,028.00
North Carolina	1,257.00	1,257.00	2,514.00
France	1,257.00	1,257.00	2,514.00
Germany	1,257.00	1,257.00	2,514.00
Italy	1,257.00	1,257.00	2,514.00
Spain	1,257.00	1,257.00	2,514.00
Sweden	1,257.00	1,257.00	2,514.00
Switzerland	1,257.00	1,257.00	2,514.00
United Kingdom	1,257.00	1,257.00	2,514.00
United States	1,257.00	1,257.00	2,514.00
Total	12,570.00	12,570.00	25,140.00

Additional expenditures were made from appropriations for the fiscal year 1957. These were expended \$1,000,000 in the fiscal year 1957 and \$1,000,000 in the fiscal year 1958 from January 1 to June 30.

Under appropriations for the Department of State for the fiscal year 1958 and from appropriations for the fiscal year 1957, a summary of the expenditures from these appropriations is found in following table.

GRAPH SHOWING EXPENDITURES BY PROGRAMS FOR BLISTER RUST CONTROL IN THE
SOUTHERN APPALACHIAN REGION FOR 1938.

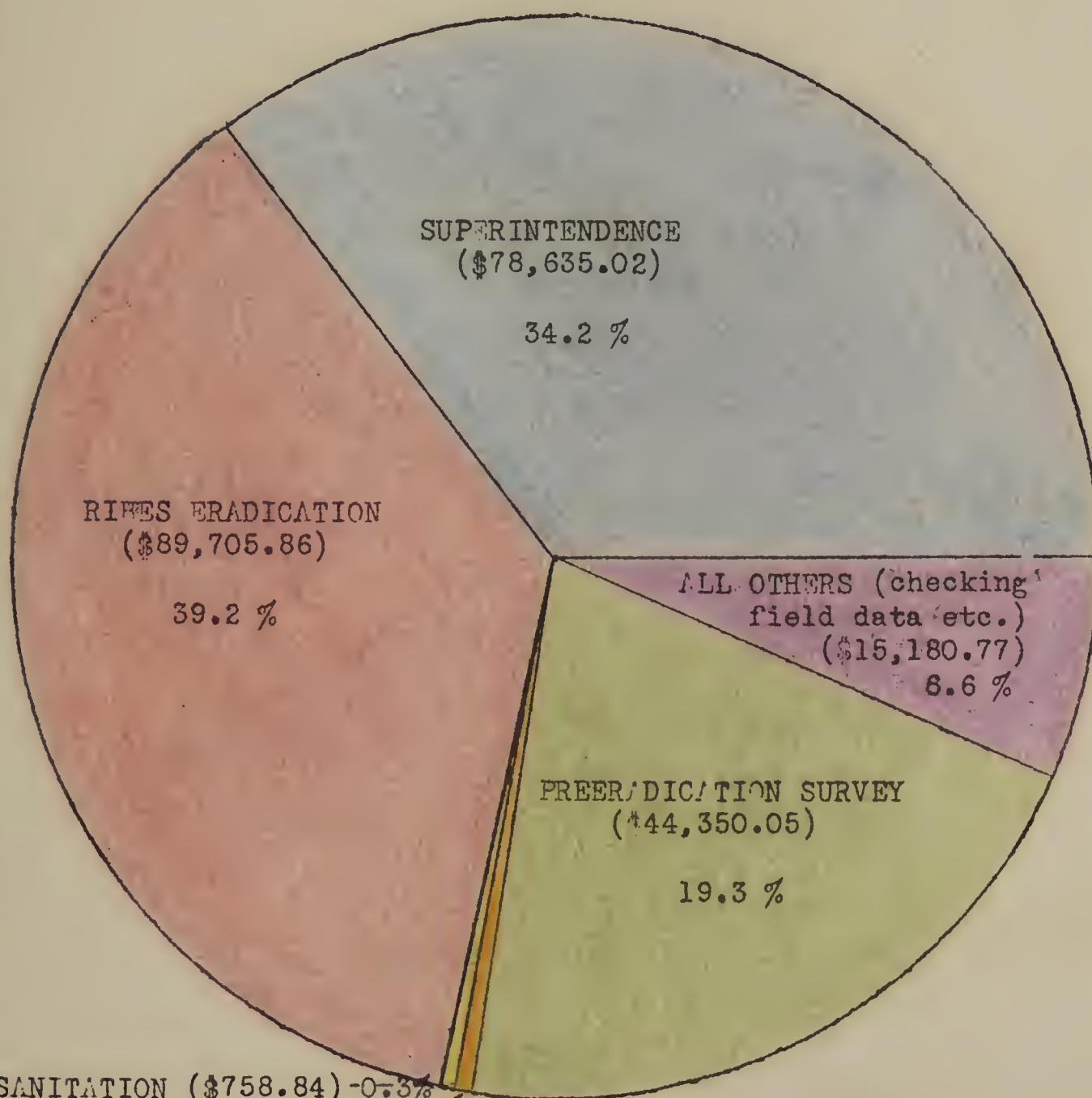
(Total Expenditures in 1938 - \$229,522.20)



19.3

GRAPH SHOWING EXPENDITURES BY ACTIVITIES FOR BLISTER RUST CONTROL IN THE
SOUTHERN APPALACHIAN REGION FOR 1938

(Total Expenditures in 1938 - \$229,522.20)



NURSERY SANITATION (\$758.84) - 0.3 %
CANKER ELIMINATION (\$891.66) - 0.4 %

GRAPH SHOWING TOTAL EXPENDITURES (BY STATES, INCLUDING DISTRICT OF COLUMBIA)
 FOR BLISTER RUST CONTROL IN THE SOUTHERN APPALACHIAN REGION FOR 1938
 (Total Expenditures For Region in 1938 - \$229,522.20)

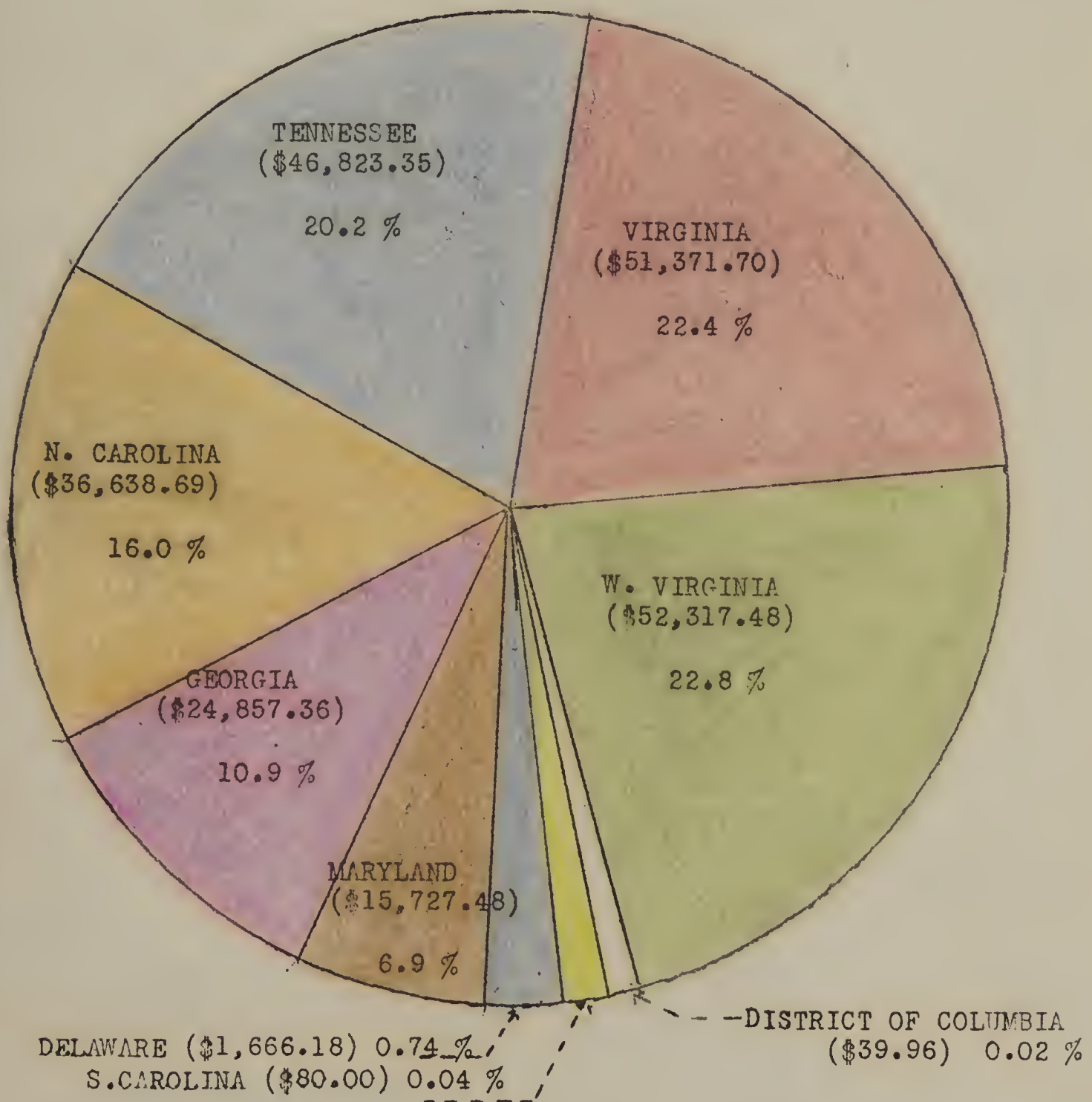




Figure 1: A pie chart showing the distribution of data across eight categories. The chart is divided into eight segments, with the following approximate values:

Segment	Value	Percentage
1	15	15%
2	20	20%
3	10	10%
4	10	10%
5	10	10%
6	10	10%
7	10	10%
8	15	15%

ANALYSIS OF EXPENDITURES FROM REGULAR APPROPRIATION FOR
BLISTER RUST CONTROL IN THE SOUTHERN APPALACHIAN STATES FOR
Fiscal Year 1938

For Period July 1 to December 31, 1937

Salaries

Hudgins, M. C.	\$	60.00
Pierce, R. G.		1,900.00
Placek		83.33

Total Salaries	\$2,043.33
----------------	------------

Expense Accounts

Pierce, R. G.	Exp.	9.75
"	T. R.	13.35
Yost, H. E.	Exp.	15.40

Total Expenses	38.50
Grand Total for six months' period	\$2,081.83

For Period January 1 to June 30, 1938

Salaries

Hopper, R. G.	405.00
Hudgins, M. C.	772.50
Luce, J. G. Jr.,	1,300.00
Mann, James M.	80.00
Pierce, Roy G.	1,900.00
Placek, L. A.	999.96
Reedy Reva V.	120.00
Yost, H. E.	1,300.00

Total Salaries	\$6,877.46
----------------	------------

Expenses

Lawson Motor Co.	3.00
Pierce, R. G.	Exp. 13.83
"	T. R. 2.35
Placek, L. A.	13.75
Hells Transfer Co.	1.00
Yost, H. E.	3.00

Total Expenses	36.93
----------------	-------

Grand Total for six months' period	\$6,914.39
Grand Total for Fiscal Year	8,996.22
Salaries for " "	8,920.79
Expenses " " "	75.43

ANALYSIS OF EXPENDITURES FROM REGULAR APPROPRIATION FOR
SIXTH FISCAL YEAR IN THE SEVENTH APPROPRIATION STATE FOR
FISCAL YEAR 1938

For Period July 1 to December 31, 1937

Salaries

Wagner, W. C.	50.00
Wagner, W. C.	1,000.00
Wagner	50.00

Total Salaries

1,100.00

Expenses

Wagner, W. C.	Exp.	5.00
Wagner, W. C.	Exp.	10.00
Wagner, W. C.	Exp.	15.00

Total Expenses

Grand Total for six months' period

1,115.00

For Period January 1 to June 30, 1938

Salaries

Wagner, W. C.	50.00
Wagner, W. C.	75.00
Wagner, W. C.	1,000.00
Wagner, W. C.	50.00
Wagner, W. C.	1,000.00
Wagner, W. C.	50.00
Wagner, W. C.	100.00
Wagner, W. C.	1,000.00

Total Salaries

2,225.00

Expenses

Wagner, W. C.	Exp.	5.00
Wagner, W. C.	Exp.	10.00
Wagner, W. C.	Exp.	15.00
Wagner, W. C.	Exp.	10.00
Wagner, W. C.	Exp.	1.00
Wagner, W. C.	Exp.	5.00

Total Expenses

Grand Total for six months' period

2,240.00

Analysis of Expenditures From Regular Appropriation For Blister Rust Control

In the Southern Appalachian States For Fiscal Year 1939
For Period July 1 to December 31, 1938

Salaries

Pierce, R. G.	\$1,900.00	
Hudgins, M. C.	810.00	
Luce, J. G. Jr.,	216.66	
Hopper, R. G.	62.16	
Yost, H. E.	216.66	
Hamric, H. E.	553.50	
Tanksley, J. D.	1,083.30	
Ball, J. C.	648.98	
Total Salaries		\$5,492.26

Expense Accounts

Yost-(Reimbursement to WPA)	36.10	
Pierce, R. G.	229.20	
Yost, H. E.	37.25	
Ball, J. C.	86.96	
Binner, E. V.	4.30	
Placek, L. A.	7.50	
Luce, J. G. Jr.,	1.72	
Total Expense Accounts		403.03

Expenses

Pierce, R. G. (T. R.)	150.41	
Yost, H. E.	45.72	
Ball, J. C.	30.45	
Henry W. Moore	33.70	
Lawson Motor Company	19.00	
Richmond Garage	7.25	
Total Expenses		286.53

Grand total for six months' period \$6,181.82

Grand Total for Calendar Year 1938 \$13,096.21

GEORGIA

Appropriation 501082

	July 1 to December 31, 1937	January 1 to June 31, 1938
Appointees	\$ 2,919.96	\$2,126.83
Relief	7,425.05	5,834.41
Per Diem	208.50	301.25
Mileage	599.15	67.90
Rental, Buildings	48.00	48.00
Rental, Equipment	4.00	
Transportation Requests		18.90
Gas and Oil	369.41	498.68
Repairs - parts	399.69	257.61
Repairs - labor	89.55	118.50
Telegraph		6.30
Telephone	23.10	26.18
Supplies	70.00	118.63
Equipment	187.10	
Miscellaneous	.75	3.65
Freight and Express	185.12	
Storage		39.00
	<hr/>	<hr/>
	\$12,529.38	\$9,465.82

Total Allotment \$22,268.00

Balance 272.78

GRAND TOTAL \$21,995.22

EXPENDITURES

Appropriation 1932

July 1 to December 31, 1931	July 1 to January 1, 1932
Appointments	\$ 2,919.96
Relief	7,452.07
Per Diem	202.20
Mileage	299.12
Hotel, Building	148.00
Hotel, Equipment	1.00
Transportation Expenses	
Gas and Oil	269.17
Repairs - parts	299.69
Repairs - labor	89.25
Telephone	6.20
Telegrams	25.10
Copies	70.00
Equipment	187.10
Stationery	7.75
Freight and Express	182.12
Storage	
	<hr/>
	\$12,259.38
	<hr/>
	\$2,162.82

Grand Total \$21,992.20

Balance 275.78

Total Available \$22,268.00

MARYLAND

Appropriation 501082

July 1 to
December 31, 1937

January 1 to
June 30, 1938

Appointees	\$ 1,839.96
Relief	7,089.83
Per Diem	357.80
Mileage	616.65
Transportation Requests	25.25
Gas and Oil	151.89
Repairs - Parts	64.77
Repairs - Labor	22.98
Telegraph	5.05
Telephone	5.40
Supplies	19.78
Miscellaneous	1.30
Freight and Express	92.00
Storage	24.50

\$10,317.16

GRAND TOTAL \$15,525.37

Allotment	15,900.00
Balance	347.63

Expenditures 15,552.37

(27.00 encumbrance not paid yet)

\$ 801.00

3,597.60

232.06

148.65

13.44

199.84

45.22

49.52

3.20

3.70

64.17

2.95

42.61

4.25

\$5,208.72

21

---BARTLEY---

at Fortification 201025

January 1 to
June 30, 1933

July 1 to
December 31, 1933

Appointments	\$ 1,833.96	\$ 101.00
Hotel	1,089.63	3,527.60
Post Office	321.80	222.00
Wine	616.63	118.62
Transportation Expenses	28.23	13.11
Gas and Oil	121.82	133.81
Repairs - Parts	61.77	12.22
Repairs - Labor	52.98	14.22
Telephone	2.02	3.20
Telegraph	2.40	2.70
Supplies	12.78	61.77
Wine	1.20	2.22
Freight and Express	22.00	12.61
Storage	21.20	1.22

\$2,308.13
21

\$10,217.16

GRAND TOTAL \$12,525.31

12,525.31
31.73

(\$27.00 expenditure not
paid yet)

12,525.31

Expenditures

All items
paid

NORTH CAROLINA

Appropriation 501082

July 1 to
December 31, 1937

January 1 to
June 30, 1938

Appointees	\$ 3,729.96	\$ 2,379.96
Relief	12,597.37	8,574.89
Rental - Equipment	23.40	-
Transportation Requests	20.20	94.45
Per Diem	217.87	273.09
Mileage	1,295.61	242.20
Gas and oil	749.53	902.58
Repairs - Parts	523.16	286.13
Repairs - Labor	257.92	179.29
Telegraph	57.20	58.54
Telephone	66.67	97.18
Supplies	158.35	158.16
Equipment	203.84	68.59
Freight and Express	160.60	320.54
Miscellaneous	12.30	26.28
Storage	64.25	156.90

\$20,138.23

\$13,818.78

\$33,990.00

Appropriation

32.99

Unencumbered balance

\$ 33,957.01

Expenditures

NORTH CAROLINA

Appropriation 50100

July 1 to
June 30, 1937

July 1 to
December 31, 1937

\$ 2,372.96

\$ 2,372.96

24.45

275.00

212.20

202.20

234.12

179.25

28.40

27.12

120.12

22.25

320.24

27.20

120.40

\$ 2,612.71

\$ 2,372.96

12,327.37

25.10

Transportation Expenses 20.20

217.87

1,225.61

162.25

222.16

277.25

27.20

20.67

128.22

222.84

Travel and Expenses 120.60

22.20

21.25

\$ 25,138.23

Appropriation

Office

General - Equipment

For Dinner

Wife's

Gas and Oil

Appellate - Travel

Appellate - Labor

Telephone

Telephone

Appellate

Equipment

Travel and Expenses

Miscellaneous

Storage

\$ 25,138.23

25.22

\$ 25,163.45

Appropriation

Unexpended Balance

Expenses

TENNESSEE

Appropriation 501082

	July 1 to December 31, 1937	January 1 to June 30, 1938
Appointees	\$ 4,484.93	\$ 3,717.96
Relief	14,559.06	15,305.83
Per Diem	142.50	151.49
Mileage	536.70	195.95
Rental - Equipment	9.00	
Transportation Requests	4.20	22.25
Transportation, laborers	131.50	
Gas and Oil	740.97	1,177.86
Repairs - Parts	504.01	816.09
Repairs - Labor	278.94	448.78
Telegraph	75.54	61.00
Telephone	2.65	.95
Supplies	130.41	99.25
Equipment	322.87	17.12
Freight and Express	1.84	525.23
Miscellaneous		3.09
Storage	16.75	50.10

 \$21,941.87

 \$22,592.95

Allotment \$45,316.00

Unencumbered Balance 781.18

Expenditures 44,534.82

APPROPRIATION

Appropriation 2010-2011

January 1 to June 30, 1999	July 1 to December 31, 1999	
4,111.96	4,404.92	Appropriation
12,309.03	14,229.00	Relief
121.49	142.50	Top Dress
122.22	236.70	Miscellaneous
	2.00	General - Equipment
25.25	1.20	Transportation Expenses
	121.20	Transportation, Laborers
1,177.84	140.97	Gas and Oil
86.09	201.01	Repairs - Parts
440.78	276.24	Repairs - Labor
61.00	72.24	Telephone
29.	2.62	Telephones
22.22	120.11	Supplies
21.75	222.07	Equipment
22.22	1.00	Freight and Express
3.00		Miscellaneous
20.10	16.75	Postage
<u>22,325.22</u>	<u>78,141.84</u>	

44,236.00
 81.18
 14,236.00
 44,236.00
 81.18
 14,236.00

VIRGINIA

(Appropriation 501032)

	July 1 to December 31, 1937	January 1 to June 30, 1938
Appointees	3,842.46	2,042.17
Non Relief	188.36	-
Relief	13,112.22	10,663.05
Per Diem	444.21	660.86
Mileage	1,218.15	445.66
Rental - Equipment	162.50	19.74
Rental - Buildings	4.00	48.00
Transportation Requests	23.20	52.15
Gas and oil	1,187.75	1,400.28
Repairs - Parts	518.61	633.42
Repairs - Labor	166.35	150.03
Telegraph	31.95	62.44
Telephone	84.65	53.47
Supplies	400.26	440.83
Equipment	318.62	42.32
Freight and Express	171.00	119.19
Miscellaneous	22.70	12.01
Storage	-	1.65
	<u>21,896.99</u>	<u>17,662.32</u>

Total Expenditures (Virginia) \$39,559.31

\$45,166.00

633.22

\$44,532.78

Allotment, Virginia and Richmond

Balance

Expenditures, Virginia and Richmond

ALPHABETICALLY

(Appropriations by Item)

July 1 to December 31, 1937	July 1 to June 30, 1938	
4,385.46	5,584.17	Appropriations
188.96	-	Non-voted
15,112.38	10,802.02	Unvoted
144.41	60.00	For War
1,216.12	114.66	Unvoted
162.90	10.74	Unvoted - Equipment
4.00	10.00	Unvoted - Station
27.20	11.17	Unvoted - Transportation Expenses
1,187.75	1,180.40	Unvoted - and all
175.01	67.11	Unvoted - Station
166.99	151.02	Unvoted - Labor
31.92	62.44	Unvoted - Unvoted
81.65	74.25	Unvoted - Unvoted
160.26	160.63	Unvoted - Unvoted
118.62	62.75	Unvoted - Unvoted
171.00	114.19	Unvoted - Unvoted
24.70	12.01	Unvoted - Unvoted
-	1.62	Unvoted - Unvoted
121,000.00	117,000.00	

Total Appropriations (Estimated) 121,000.00

121,000.00	117,000.00	Estimated Appropriations and Unvoted
121,000.00	117,000.00	Estimated Appropriations and Unvoted

Statement of Expenditures by Classification for
West Virginia

Appropriation 501082

	<u>7/1 to 12/31/37</u>	<u>1/1 to 6/30/38</u>
Appointees	4,539.96	3,375.80
Relief	20,968.82	17,365.70
Per Diem	161.50	213.58
Mileage	744.90	562.15
Rental - Equipment	196.30	160.90
Transportation Requests	3.40	-
Gas and oil	276.08	542.07
Repairs - Parts	155.97	285.07
Repairs - Labor	42.65	164.59
Telegraph	2.94	13.80
Telephone	1.50	2.15
Supplies	489.32	187.91
Equipment	-	268.02
Freight and express	115.00	198.77
Miscellaneous	31.50	2.45
Storage	2.00	25.10
 Totals	 <u>27,731.84</u>	 <u>23,368.06</u>
Alotment	52,440.00	
Balance	<u>1,340.10</u>	
Grand Total	51,099.90	

ADMINISTRATIVE EXPENSES

(Appropriation 50100)

January 1 to
June 30, 1958

December 31, 1957
July 1 to

Appropriation	51,276.63
for Rent	173.75
Transportation Expenses	25.25
Medical - Equipment	2.55
Medical - Supplies	291.80
Gas and Oil	25.17
Repairs - Parts	27.27
Repairs - Labor	10.00
Telephone	101.20
Telegrams	77.70
Supplies	132.10
Equipment	125.81
Postage	10.81
Freight and Express	2.25
Insurance	27.10

52,040.25

52,721.40

GRAND TOTAL \$2,721.40

50,000.00
22,000.00 Appropriation

BREAKDOWN OF COOPERATIVE FUNDS

FOR FISCAL YEAR 1939

BLISTER RUST CONTROL

State	Funds Allotted From Forestry or Other State Appropriation	Total Cash Available	Value of Other Services Contributed For Blister Rust Control		Value of Services For Nursery Inspection for B. R. C.	Character of Contributed and Other Services	Total of Contri- buted Services	Total Cash and Contributed Services
			State	Private				State
Georgia			2,710	1,000.00	(1)	Technical Services	3,710	3,710
Maryland			1,985	115.00	(2)	Office Space; Clerical Help; Technical Services	2,250	2,250
North Carolina	5,000	5,000	100	8,160.00	(3)	Labor; Office Space; Equipment	8,260	13,260
Tennessee			1,100	240.00		Clerical Help; Office Space; Office Equipment	1,340	1,340
Virginia	600	600	720	500.00	80.00	Office Space; Equipment; Technical Services	1,300	1,900
West Virginia	2,000	2,000	538		100.00	Office Space; Equipment; Technical Services	638	2,638
Totals	7,600	7,600	7,153	9,915.00	430.00		17,498	25,098

(1) Value of cultivated Ribes (Ga.) \$1,000.00

(2) Value includes " " (Md.) 15.00

(3) Value includes " " (N. C.) 2,000.00

Compiled May 26, 1938
and revised May 25, 1939From reports from State Leaders
and Cooperative Agreements.

State	Appropriation	Other State	Forestry or	Available	For other	Value of other
Georgia	1,000,000					1,000,000
Maryland	1,000,000					1,000,000
North Carolina	1,000,000					1,000,000
Tennessee	1,000,000					1,000,000
Virginia	1,000,000					1,000,000
West Virginia	1,000,000					1,000,000
Total	5,000,000					5,000,000

(1)	Value of other	1,000,000
(2)	Value included	1,000,000
(3)	Value included	1,000,000

PREERADICATION SURVEYS



White pines have scenic as well as timber value.
Virginia.



under these as there is some one named at the
bottom

SUMMARY OF PESTERADICATION SURVEY IN THE SOUTHERN APPALACHIAN STATES
1936 to 1938 Inclusive

States	1936			1937			1938		
	No. Acres Mapped including pine and prot. zones	Number 8 hour man-days labor	Cost	No. Acres mapped including pine and prot. zones	Number 8 hour man-days labor	Cost	No. Acres mapped including pine and prot. zones	Number 8 hour man-days labor	Cost
Delaware	-	-	-	-	-	-	1,076	280	\$ 1,118.27
District of Columbia							1,875	(3)	(3)
Georgia	120,690	500(1)	\$ 9,000.00	208,631	1,762	\$ 1,859.39	102,294	1,582	2,657.00
Kentucky	-	-	-	1,617	(2)	(2)	1,090	(4)	(4)
Maryland	5,817	354	936.10	12,583	484	1,655.43	55,364	324	1,096.23
North Carolina	6,000	480	1,682.56	677,166	7,310	18,145.13	382,961	4,405	8,865.59
South Carolina	-	-	-	-	-	-	3,100	4	20.00
Tennessee	102,443	941	2,842.61	237,768	3,877.6	8,617.49	152,142	5,337	12,805.16
Virginia	108,919	2,193	4,017.30	190,497	4,104	6,477.99	86,421	2,000	3,145.84
West Virginia	103,146	2,811	10,053.51	182,826	5,101	18,545.57	139,847	3,913	14,641.97
Total	446,815	7,234	28,532.08	1,531,088	22,638.6	55,301.00	926,170	17,845	44,350.05

- (1) Georgia 1936 number of man days was an estimate of the total man-days labor expenditure on eradication and survey which was carried on at one and the same time, 80% of the labor was put down arbitrarily as eradication.
- (2) Kentucky 1937 work in Kentucky was performed by West Virginia agent, his time being included under supervision.
- (3) District of Columbia work done was carried on by Mr. Yost who is in charge of supervision.
- (4) Kentucky 1938 work was done by R. Roy G. Pierce and charged to District Office.

1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025	1024	1023	1022	1021	1020	1019	1018	1017	1016	1015	1014	1013	1012	1011	1010	1009	1008	1007	1006	1005	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	989	988	987	986	985	984	983	982	981	980	979	978	977	976	975	974	973	972	971	970	969	968	967	966	965	964	963	962	961	960	959	958	957	956	955	954	953	952	951	950	949	948	947	946	945	944	943	942	941	940	939	938	937	936	935	934	933	932	931	930	929	928	927	926	925	924	923	922	921	920	919	918	917	916	915	914	913	912	911	910	909	908	907	906	905	904	903	902	901	900	899	898	897	896	895	894	893	892	891	890	889	888	887	886	885	884	883	882	881	880	879	878	877	876	875	874	873	872	871	870	869	868	867	866	865	864	863	862	861	860	859	858	857	856	855	854	853	852	851	850	849	848	847	846	845	844	843	842	841	840	839	838	837	836	835	834	833	832	831	830	829	828	827	826	825	824	823	822	821	820	819	818	817	816	815	814	813	812	811	810	809	808	807	806	805	804	803	802	801	800	799	798	797	796	795	794	793	792	791	790	789	788	787	786	785	784	783	782	781	780	779	778	777	776	775	774	773	772	771	770	769	768	767	766	765	764	763	762	761	760	759	758	757	756	755	754	753	752	751	750	749	748	747	746	745	744	743	742	741	740	739	738	737	736	735	734	733	732	731	730	729	728	727	726	725	724	723	722	721	720	719	718	717	716	715	714	713	712	711	710	709	708	707	706	705	704	703	702	701	700	699	698	697	696	695	694	693	692	691	690	689	688	687	686	685	684	683	682	681	680	679	678	677	676	675	674	673	672	671	670	669	668	667	666	665	664	663	662	661	660	659	658	657	656	655	654	653	652	651	650	649	648	647	646	645	644	643	642	641	640	639	638	637	636	635	634	633	632	631	630	629	628	627	626	625	624	623	622	621	620	619	618	617	616	615	614	613	612	611	610	609	608	607	606	605	604	603	602	601	600	599	598	597	596	595	594	593	592	591	590	589	588	587	586	585	584	583	582	581	580	579	578	577	576	575	574	573	572	571	570	569	568	567	566	565	564	563	562	561	560	559	558	557	556	555	554	553	552	551	550	549	548	547	546	545	544	543	542	541	540	539	538	537	536	535	534	533	532	531	530	529	528	527	526	525	524	52
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- (1) On 12/15/54, the following information was received from the Bureau of the Census, Washington, D.C. regarding the 1954 Census of the United States:
- (2) The 1954 Census of the United States was completed on 12/15/54.
- (3) The 1954 Census of the United States was completed on 12/15/54.
- (4) The 1954 Census of the United States was completed on 12/15/54.

PREERADICATION SURVEYS

Delaware

Pine Surveys were begun in 1938 under direction of Mr. Yost, and Supervisor Bernard Pufahl. No large acreage of white pine exists in the State. Up to December 31, 1938, 68 acres of white pine, of which 37 were municipally-owned and 31 privately-owned had been surveyed, in addition to the location of 2,728 ornamental white pine at 378 separate locations.

District of Columbia

Pine Surveys were begun in November in the District of Columbia by Mr. H. E. Yost. 1,427 pines were located of which 953 were publicly owned. Most of the white pines are in the Northwest section of the District, in Rock Creek Park and in West Potomac Park and on private grounds. One native stand of approximately three acres was found in Rock Creek with trees of all ages. This is north of Kingsley Street and south of Park Road. Surveys for Ribes have not been made.

Maryland

Practically all of the initial survey work has been completed in Maryland, and in the future no large increases are expected annually, although the addition of plantations and the increase in natural stands through seed distribution may increase pine acreage slightly each year.

Mr. Yost's table on Preeradication Survey showing both 1938 work and results of previous surveys is here given.

TABLE PREERADICATION,

BY STATE.

(Plantations and

Outstanding Locations)

PROGRESS OF RESEARCH

Delaware

The surveys were begun in 1958 under direction of Mr. Toot, and supervisor Bernard Pinski. No large amounts of white pine were in the State. Up to December 31, 1958, 68 acres of white pine, of which 57 were privately-owned and 11 privately-owned had been surveyed, in addition to the location of 2,728 ornamental white pine at 376 separate locations.

District of Columbia

The surveys were begun in November in the District of Columbia by Mr. H. E. Toot. 1,127 pines were located of which 957 were privately owned. Most of the white pines are in the Northwest section of the District, in Rock Creek Park and in West Potomac Park and on private grounds. One native stand of approximately three acres was found in Rock Creek with trees of all ages. This is north of Kinross Street and south of Park Road. Surveys for white pines have not been made.

Maryland

Practically all of the initial survey work has been completed in Maryland, and in the future no large increases are expected annually, although the addition of plantations and the increase in natural stands through seed distribution may increase pine acreage slightly each year.

Mr. Toot's table on Investigation Survey showing both 1958 work and results of previous surveys is here given.

Preeradication Survey 1938 and Cumulative to 12/31/38

Maryland

County		50 trees and over per acre approximately 5%	Less than 50 trees per acre	Total white pine	White pine worth	White Pine Not Worth Protecting	Crew	Scout	Total	Estimated Value of white pine	No. of orna- mental trees	Approximate % completion of survey
Allegany	(3) total	26,002	21,030	47,032	45,982	1,050	0	98,400	98,400	\$302,080	-	95
Anne Arundel	1938 to	5	5	10	10	0	0	110	110	60	32	5
Baltimore	1937	867	500	1,367	1,367	0		10,000	10,000	9,670	43,061	
	1938	59 $\frac{1}{2}$	385	444 $\frac{1}{2}$	444 $\frac{1}{2}$	0	0	note 1		1,370	note 2	
	total	926 $\frac{1}{2}$	885	1,811 $\frac{1}{2}$	1,811 $\frac{1}{2}$	0	0	6,500	6,500	11,040	20,764	80
Carroll	1938	122	167	289	289	0	0	2,930	2,930	1,554.	533	75
Frederick	1937	867	635	1,502	1,502	0	950	2,232	3,182	9,940	-	
	1938	24	0	24	24	0		440	440	240		
	total	891	635	1,526	1,526	0	950	2,672	3,622	10,180		95
Garrett	1937	4,461	4,056	8,517	5,747	2,770	18,414	4,723	23,137	52,722	438	
	1938	296	231	527	527	0	2,224	980	3,204	3,422	note 2	
	total	4,757	4,287	9,044	6,274	2,770	20,638	5,703	26,341	56,144	394	95
Harford	1938	25	75	100	100	0	0	250	250	400	88	15
Howard	1938	16 $\frac{1}{2}$	0	16 $\frac{1}{2}$	16 $\frac{1}{2}$	0	0	230	230	160	378	50
	(3)	36	0	36	36	0	0	0	0	360	10,624	80
Montgomery	total/										22	5
Prince George	1938											
	(3)											
Washington	total	12,029	11,500	23,529	21,529	2,000	0	68,875	68,875	143,290		95
Total to 1937		44,262	37,721	81,983	76,163	5,820	19,364	184,230	203,594	518,062	54,123	
Total 1938		548	863	1,411	1,411	-	2,224	1,440	3,664	7,206.	21,228	
Grand Total		44,810	38,584	83,394	77,574	5,820	21,588	185,670	207,258	525,268	32,835	

(1) The 10,000 acreage represents in part work on Prettyboy and Loch Raven Reservation, clearing planting sites of cultivated Ribes and is reduced by 3,500 acres.

(2) 21,288 trees previously reported as ornamental trees and mapped as plantations and now reported under acreage.

(3) No preeradication survey during 1938 in Allegany, Washington and Montgomery Counties.

maps made by the Tennessee Valley Authority in their recent survey of the Tennessee Valley Basin. — These large-scale maps have proven ideal for overlay work and have aided greatly in the preparation of final copies of the detailed maps on white pine survey, scouting and eradication work.

The use of the new system of mapping has speeded up the work considerably. By using the strip method of mapping, very accurate maps have been made showing the exact location of the pine by size, density, ribes areas, areas scouted and eradicated.

During 1937 a total of 200,211 acres of white pine were mapped by this system. Of this total 115,010 acres of pine were 5% and up in composition, while 85,201 acres were below 5% in composition. In 1938 a total of 116,262 acres of pine were mapped. The total white pine acreage mapped in 1938 was 71,458 acres above 5% in composition and 44,804 acres below 5% in composition. For the two years that the mapping system has been in use a total of 316,473 acres of white pine have been mapped and protected in Sullivan, Johnson, Carter, Unicoi, Morgan, Cumberland, Pentress, and Pickett Counties, and in a portion of Scott County. By comparing the acreage mapped from 1933 through 1936 with the mapping done in 1937 and 1938, the advantages of the present system can be seen readily. In the period of time from 1933 through 1936 a total of 57,634 acres were mapped, while 316,473 acres were mapped during 1937 and 1938 using the new system of strip mapping. These figures do not take into consideration the acreages covered in eradication, checking and scouting." Extract from Annual Report by Mr. Tanksley.

In the above paragraph 505 is taken as somewhat synonymous with 50 trees per acre. All of the work in Tennessee was carried on as WPA Project. There remains a considerable acreage of pine yet to be surveyed according to Mr. Tanksley, lying mostly along the eastern edge of the State, southwest of Carter and Unicoi Counties. Work was carried on in all of these other counties from 1933 to 1935, by the Forest Service in the then Unaka, Pisgah and Cherokee National Forests and by the Park Service in the proposed Great Smoky Mountains National Park, and by our PWA men on private lands. The lower limit of pine surveyed was a stand in which white pine occupied 10% of the total number of stems per acre.

Virginia

In 1938 nursery work was carried on in the George Washington National Forest, the Shenandoah National Park, two State Parks. The Fairy Stone, and Douthat, and Private

maps made by the Tennessee Valley Authority in their recent survey of the Tennessee Valley basin. These large-scale maps are more ideal for overlay work and have added greatly in the preparation of final copies of the detailed maps on which the survey, according to the eradication work.

The use of the new system of mapping has speeded up the work considerably. By using the strip method of mapping, very accurate maps have been made showing the exact location of the pine by size, density, fiber areas, areas recorded and eradicated.

During 1957 a total of 500,211 acres of white pine were mapped by this system. Of this total 11,010 acres of pine were 50 and up in composition, while 489,201 acres were below 50 in composition. In 1958 a total of 116,365 acres of pine were mapped. The total white pine acreage mapped in 1958 was 71,453 acres above 50 in composition and 44,912 acres below 50 in composition. For the two years that the mapping system has been in use a total of 116,413 acres of white pine have been mapped and protected in Sullivan, Johnson, Carter, Lincoln, Morgan, Cumberland, Greene, and Pickens Counties, and in a portion of East County. By comparing the acreage mapped from 1955 through 1958 with the mapping done in 1957 and 1956, the advantages of the present system can be seen readily. In the period of time from 1955 through 1958 a total of 57,654 acres were mapped, while 516,413 acres were mapped during 1957 and 1958 using the new system of strip mapping. These figures do not take into consideration the acreage covered in eradication, logging and burning. (Excerpt from annual report by W. J. Tansley.)

In the above paragraph 50% is taken as standard for mapping with 50 trees per acre. All of the work in Tennessee was carried on as a strip project. These results are similar to those of other areas but to be surveyed according to the Tansley strip method along the eastern edge of the State, southwest of Carter and West Counties. Work was carried on in all of these other counties from 1955 to 1957, by the Forest Service in the New Union, Pisgah and Cherokee National Forests and by the Park Service in the proposed Great Smoky Mountains National Park, and by one 50% and on private lands. The lower limit of pine surveyed was a stand in which white pine occupied 10% of the total number of trees per acre.

Virginia

In 1958 survey work was carried on in the George Washington National Forest, the Shenandoah National Park, two State Parks, the Folly Stone, and Lincolnton, and private

lands in Grayson, Madison, Shenandoah, Rockingham and Wythe Counties. Mr. Luce's table sums up this work.

SUMMARY OF OWNERSHIP OF PRERADICATION SURVEYS 1938

Ownership	Number of Pine Areas	5% or over Pine	Control	Under 5% Pine	Control	Total man- hours	Costs Total
Federal Lands							
Shenandoah N. Park	2	1	75	2	76	-	-
Total	2	1	75	2	76	-	-
George Washington National Forest							
Lee District	11	407	1,743	0	0	128	31.66
Dry River District	75	6,872	14,324	149	1,001	4,784	1,080.11
Deerfield District	74	2,536	11,633	0	0	1,196	262.94
Total	160	9,815	27,700	149	1,001	6,108	1,374.71
Total Federal Lands	162	9,816	27,775	151	1,077	6,108	1,374.71
Private Lands							
Grayson	22	1,295	4,415	115	480	1,290	231.68
Madison	3	68	442	0	0	agent	agent
Shenandoah	8	321	1,219	0	0	144	32.80
Rockingham	2	115	420	0	0	120	30.16
Wythe	55	15,787	16,653	0	0	3,383	1,471.37
Total	90	17,586	23,149	115	480	4,937	1,766.01
State Lands							
Allegheny	12	816	2,142	0	0	16	5.12
Patrick	3	145	545	0	0	agent	agent
Total State Lands	15	961	2,687	0	0	16	5.12
Total Non-Federal Lands	105	18,547	25,636	115	480	4,953	1,771.13
Total All Lands	265	28,363	56,311	266	1,481	11,061	3,145.84

Cumulative Preeradication Survey Work on White Pine Stands to Dec, 31, 1938

Ownership	Acreage Pine 50 Trees and over per acre	Acreage Scattered Pine Below 50 trees per acre	Total White Pine Acreage	Total Acreage Worth Protecting	Total Acreage Not Worth Protecting
National Forests:					
	30,473	544	31,017	31,017	
National Parks:					
	9,034	2	9,036	4,724	4,312
Other National Lands					
Subtotals	39,507	546	40,053	35,741	4,312
State Lands:					
Private, Corporation, & Municipal Lands	142,024	520	142,544	142,544	-
Non-Federal National	142,024	520	142,544	142,544	
Sub-totals:					
Totals - All Lands	181,531	1,066	182,597	178,285	4,312

Practically all of the surveys were carried on by WPA, although the supervision was paid for in certain cases from Regular funds in the case of Roy G. Pierce and Agents Hamric and Hopper.

West Virginia

The following extract is taken from Dr. Ashcroft's Annual Report:

"Preeradication surveys were conducted in six counties in 1938; viz, Monroe, Greenbrier, Pendleton, Hardy, Raleigh and Mercer. This type of work was performed during the dormant season when weather conditions are unfavorable for eradication of Ribes bushes. A total of 56,716 acres of pine were mapped and surveyed. The control area necessary to work to protect this pine was estimated at 139,847 acres. An additional 9,638 acres of scattered pine were examined.

The pine surveyed in 1938 was divided according to ownership as follows: Federal lands, 2,913 acres; State lands, 1,164 acres; Private lands, 52,639 acres. Of the pine on Federal land 178 acres were on the Monongahela National Forests in Greenbrier County, and the remainder was on the George Washington National Forests in Pendleton and Hardy Counties. The pine on State lands was all on the Greenbrier State Forest in Greenbrier County. The pine on Private land was divided among six counties.

At the close of 1938 preeradication surveys had been made on 207,918 acres of pine land, of which, pine averaged 50 trees or more per acre on 192,247 acres.

Pine surveys were completed in Monroe, Greenbrier and Raleigh Counties. In Pendleton County all of the pine on private land has been surveyed and only part of that on the George Washington National Forest remains to be covered. In Mercer County approximately 55% of the pine and in Hardy about 20% of the preeradication work is completed.

The three counties in which preeradication was finished this year have the following acreages of pine and control respectively; Raleigh, 21,593 and 52,686; Greenbrier 39,873 and 122,990; Monroe, 21,537 and 52,315. It is expected that two more counties, Mercer and Pendleton, will be completed before the opening of eradication season of 1939. By the same time Hardy and Summers will be approximately 60 and 50 percent done, leaving only a remainder in the two counties and Tucker and Grant, two very minor pine counties, for the preeradication season of 1939-40.

Investigating all of the surveys were carried on by the
Although the supervision was paid for in certain cases
from regular funds in the case of Roy G. Pierce and others
with no charge.

West Virginia

The following account is taken from Dr. Ashcroft's
Annual Report:

"Preservation surveys were conducted in six counties
in 1958: Boone, Greenbrier, Pendleton, Mingo, Lincoln
and Mingo. This type of work was performed during the
summer season when weather conditions are unfavorable for
excavation of bones. A total of 26,150 acres of pine
were mapped and surveyed. The control area necessary to work
to protect this pine was estimated at 13,075 acres. An
additional 9,075 acres of scattered pine were examined.

The pine surveyed in 1958 was divided according to
ownership as follows: Federal lands, 2,915 acres; State lands,
1,101 acres; Private lands, 25,650 acres. Of the pine on
Federal land 178 acres were on the Monongahela National
Forest in Greenbrier County, and the remainder was on the
George Washington National Forest in Pendleton and Mingo
Counties. The pine on State lands was all on the Greenbrier
State Forest in Greenbrier County. The pine on private land
was divided among six counties.

At the close of 1958 preservation surveys had been
made on 207,918 acres of pine land, of which, pine surveyed
to meet or more per acre on 192,215 acres.

Pine surveys were completed in Boone, Greenbrier
and Lincoln Counties. In Pendleton County all of the pine
on private land has been surveyed and only part of that on
the George Washington National Forest remains to be surveyed.
In Mingo County approximately 25% of the pine and in Mingo
about 20% of the preservation work is completed.

The three counties in which preservation was
included this year have the following amounts of pine and
control respectively: Mingo, 21,550 and 10,775; Green-
brier 39,650 and 122,900; Boone, 21,550 and 10,775. It is
expected that two more counties, Lincoln and Pendleton, will
be completed before the opening of next season or
1959. By the same time Mingo and Greenbrier will be approxi-
mately 60 and 50 percent done, leaving only a remnant in
the two counties and Boone and Mingo, two very minor pine
counties, for the preservation season of 1959-60.

Preeradication includes locating pine stands; determining the percentage of the stand in pine, the degree of stocking, and the quality of pine and site; estimating the acreage in pine and the acreage necessary to work to protect the pine; and detail mapping the areas on which pine makes up 5% or better of the stand.

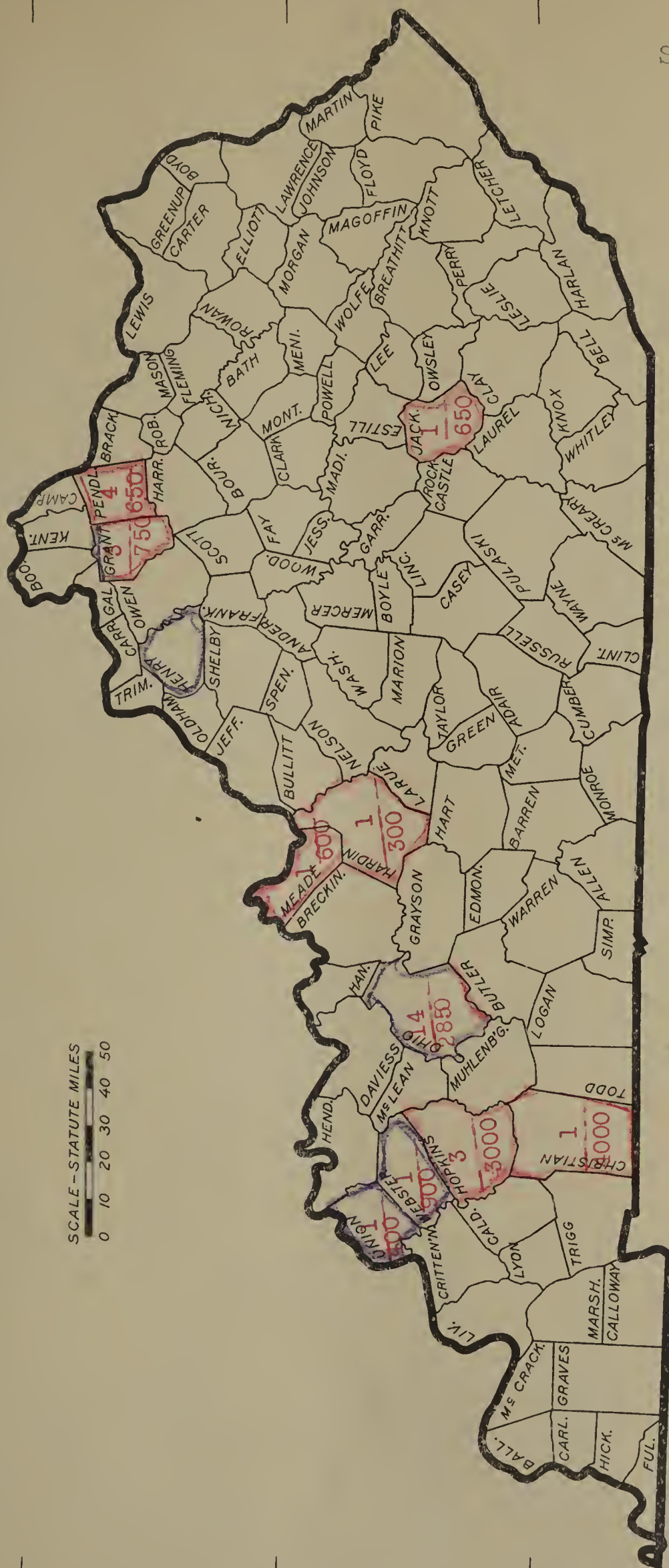


- ☒ Counties in which the percentage of pine is 5% or more
- ☐ Counties in which the percentage of pine is less than 5%
- ☐ Counties in which the percentage of pine is less than 1%
- ☐ Counties in which the percentage of pine is less than 0.5%

Prevention of pine stands; determining the percentage of the stand to pine, the degree of stocking, and the quality of pine and site; estimating the average in pine and the average necessary to work to protect the pine; and detail mapping the areas on which pine stands up 50 or better of the stand.

Surveyed by R. G. Pierce
in 1938

SCALE - STATUTE MILES
0 10 20 30 40 50



LEGEND

- Counties in which Pine and Ribes Surveyd were carried on in July-August 1938
- Counties in which no surveys of pine plantations were made by Pierce in 1938
- Counties in which some surveys were made by Pierce in 1938
- Upper figure represents No. of Individual Plantations made.
- Lower figure represents No. of white pines planted in the county

LOCAL CONTROL - RIBES ERADICATION
STATISTICAL TABLES BY STATES
GIVING DATA FOR 1938, AND FOR
PREVIOUS YEARS, BY PROJECTS

WORKING, OWNERSHIP AND
YEAR INCLUDING COST
DATA

Preeradication Surveys in Georgia and North Carolina

Using the Grid System

A grid system of preeradication survey was started in the State of Georgia, November 4, 1938 and in North Carolina on December 6, 1938.

In brief, the grid system consists of running in mile square grid units in the field, tying in the control survey lines with a base line which was run from some permanent point such as a U. S. Geological Survey corner, Forest Service lot corner, or a Bench Mark. The control survey is run in with staff compass and topographic chain. Horizontal measurements are used. On two of the control survey lines, either north and south or east and west, according to the topography, line stakes are set every 5 chains. The line stakes are used for tie-in points for the mapping crews.

After a grid unit is completed the mapping crew, consisting of a mapper and compassman, run mile-long strips through the grid unit. The strips are $1/4$ chain wide and all white pine and Ribes are counted and recorded on a preeradication survey data sheet. The field map is 8" to the mile and all type lines, topographical and cultural features are mapped as the strips are run. The strips are paced and all white pine and Ribes data recorded by one chain transects and summarized by five chain transects. The strips as run in the field are spaced 10 chains apart and are shown as run, on the field map. White pine and Ribes data as summarized by 5 chain transects are plotted on the strips, each 5 chain interval being shown on the field map. White pine is typed as 50 stems per acre and over and under 50 stems per acre. All white pine over 50 stems per acre is colored solid green; under 50 stems per acre the type area is left uncolored. Ribes are recorded by feet of live stem, and Ribes areas are shown on the map by delimiting the area with a brown line.

The system was set up so the work can be carried on using the minimum amount of labor, and planned in such a way that white pine and Ribes concentrations and the association of both will be accurately located on the map.

A final progress map is made showing a complete white pine area with any number of grid units included to make up the pine area. The progress map is drawn to a scale of 2" to the mile. The progress map will become a permanent record and will be used for all future control work.

In conclusion it may be said that the grid maps serve a fourfold purpose, namely: (1) they show quite accurately where the good and scattered white pine lies; (2) They show the

(Sample)
location of Ribes concentrations; (3) they show roads, trails, streams and other cultural and topographical features which will be of considerable aid to the Ribes eradication crews in locating Ribes areas in the field and (4) the maps will serve as a permanent record of white pine areas surveyed.

The following two pages respectively show the type of data sheet used and a sample field map showing how the strips are run.

Strip No.	Surveyed by	T. L. P. by Species	White Pine Count	Surveyed by S. Curtis Ball			Timber Type
				Strip No.	Strip Length	Strip Width	
Orig.	Adj.	synchr. dist.					
1	1-6						
2	7		3				WPE
3	8	2, 3	4				
4	9	1, 2	4				
5	10	4	5	10	70	10	
6	11	5	5	11	70	10	
7	12-13		1	12	70	10	
8	14		1				
9	15		1				
10	16	3, 1					
11	17	2					
12	18	1					
13	19						
14	20						
15	21						
16	22						
17	23						
18	24						
19	25						
20	26						
21	27-28			27-28	70	10	
22	29						
23	30						
24	31						
25	32						
26	33						
27	34						
28	35						
29	36						
30	37						
31	38						
32	39						
33	40						
34	41						
35	42						
36	43						
37	44						
38	45						
39	46						
40	47						
41	48						
42	49						
43	50						
44	51						
45	52						
46	53						
47	54						
48	55						
49	56						
50	57						
51	58						
52	59						
53	60						
54	61						
55	62						
56	63						
57	64						
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66	73						
67	74						
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71	78						
72	79						
73	80						
74	81						
75	82						
76	83						
77	84						
78	85						
79	86						
80	87						
81	88						
82	89						
83	90						
84	91						
85	92						
86	93						
87	94						
88	95						
89	96						
90	97						
91	98						
92	99						
93	100						

location of lines (3) they show roads, trails, streams and other natural and topographical features which will be of considerable aid in the location of lines in locating lines even in the field and (4) the map will serve as a permanent record of white pine areas surveyed.

The following two pages respectively show the type of data used and a sample field map showing how the data are used.

3. Sample Map

Grid No.

(Sample)

PRE-ERADICATION SURVEY DATA SHEET




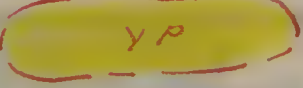



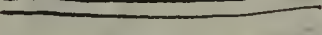

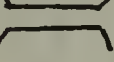



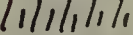


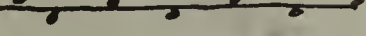
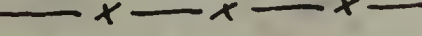









State: _____ County: _____ Quadrangle: _____

Owner: _____ Address: _____ Pine Area No. _____

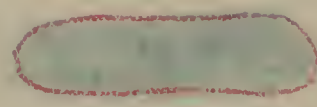
Name: _____ Date: _____

Strip No.	Transect No. By 1 chain Transects		F.L.S. By Species			White Pine Count	Summary By 5 Chain Transects			Timber Type
	Orig.	Adj.	R, cynos-bati	R.	R.		5 chain Transect No.	Pushes F.L.S.	W.P.	
1	Start strip #1, 5 chains west of south east corner. Ran north.									
	1-6	1-6					5-10			H
	7	7				3				WPH
	8	8	2,3,			6				
	9	9	1,2,			4				
	10	10	4,			3	10	5-12	16	"
	11	11	8,			-	15	1-3		H
	12-18	12-19					15-20			"
	19	20				1	20		1	WPH
	20	21				4				
	21	22				5				
o.s. 2chs. east	1		3,1,							
	2		2,	Off Strip Ribes Plot				4-7		Off
	3		1,	Plot runs north						Strip
	4									
	22	23				3				
	23	24				7				
	24	25				6	25		25	"
	25-38	26-40					30-40			YP
	39	41				2				WPYP
	40	42				5				
	41	43				1				
	42	44				2				
	43	45				8	45		18	"
	44	46				10	50		10	"
	45-63	47-63					50-70			Field
	64	67				3				WPH
	65	68				4				
	66	69				1				
	67	70				4	70		12	"
	68-72	71-73					75-80			H
	73	77				4				WPH
	74	78				7				
	75	79				10				
	76	80				5	80		26	"
	End Strip #1 4-chains west of northeast corner.									

LEGEND

White Pine Area..... (50 and more WP per acre)		Color green (Dixon #354)
Timber Type Line.....		
*Recent Cut Over Type Line....		
Scattered white pine, either.. in YP or H types (Less than 50 WP per acre)		Leave uncolored
YP (Yellow) no WP present.....		Color yellow (Dixon) #353
H (Hardwoods)..... No WP present		Color blue (Dixon) #350
Ribes Eradication Area.....		Outline in brown (Dixon #343)
Cultivated Field.....		
Primary road.....		
Secondary road.....		
Bridge.....		
Trail.....		
Mountain peak.....		
Main ridge.....		
Cliff.....		
Railroad used.....		Abandoned..... 
Telephone Line.....		
Fence.....		
Buildings.....		
Sawmill operating.....		Abandoned..... 
Running stream.....		
Intermittent stream.....		
Spring.....		
Established Gov't corner.....		
B.R.C. corner.....		
Bench mark.....		
*If area is cut-over (within last 5 years) show type symbol as..... WPH CO		

Color Green (Dixon)
#555



White Pine Area.....
(No new wood in 1934)



Timber Type Line.....



Stream Cut Over Type Line...

Leaves uncolored

Reforested white pine, etc.,
in 19 or 20 years (less than 20 years)

Color Yellow
(Dixon) #553



YF (Yellow)
No WP present.....

Color Blue
(Dixon) #320



W (Hardwood)
No WP present.....

Outline in brown (Dixon)
#543



Riparian Speciation Area.....



Collected Field.....



Primary road.....



Secondary road.....



Bridge.....



Trail.....



Mountain peak.....



Saw ridge.....



Gully.....

Abandoned.....



Telephone line.....



Telephone line.....



Telephone line.....



.....

Abandoned.....



.....



Forming stream.....



Intermittent stream.....



Spring.....

Established Boy's camp.....

G.N.C. camp.....

Beach mark.....

all areas in cut-over (within last 5 years) show type symbol as.....

(SAMPLE)
PRE-ERADICATION SURVEY MAP

State: _____ County: _____ Quadrangle: _____
Address: _____ Pine Area No. _____
Mapped By: _____ Date: _____

(scale = 8" = 1 mile)



LOCAL CONTROLSummary

In 1938 Ribes eradication was carried on in nine States, three more than in 1937, viz; in Delaware, Georgia, Kentucky, Maryland, North Carolina, South Carolina, Tennessee, Virginia and West Virginia. Laborers were secured from the WPA Project in the States of Delaware, Georgia, Maryland, North Carolina, Tennessee, Virginia and West Virginia; from the Regular and Cooperative Project in Delaware, Maryland, North Carolina, South Carolina, Virginia and West Virginia; from the CCC Project in Maryland, Virginia and West Virginia.

Table 1. Giving Summary of Ribes Eradication Data for Southern Appalachian States for 1938 and for period 1918 to 1938 Inclusive.

Year	Acreage Worked	Number of Ribes Destroyed			Number 8 hour man-days labor
		Wild	Culti.	Total	
1938	735,008	4,596,126	154,845	4,750,971	40,828
1918-'37	4887,257	16,885,817	954,314	17,840,131	154,620
1918 to 1938 inclusive	5,622,265	21,481,943	1,109,159	22,591,102	195,448

Year	No. Ribes Bushes Destroyed		No. 8 hour days		Cost Total	Data Per Acre
	Per Man-days	Per Acre	per acre			
1938	116.4	6.46	.055	\$91,921.40		\$0.125
1918-'37	115.4	3.6	.031	294,704.99		0.060
1918-1938	115.6	4.02	.035	386,626.39		0.0687

LOCAL CONTROLSummary

In 1938 Ribes eradication was carried on in nine States, three more than in 1937, viz; in Delaware, Georgia, Kentucky, Maryland, North Carolina, South Carolina, Tennessee, Virginia and West Virginia. Laborers were secured from the WPA Project in the States of Delaware, Georgia, Maryland, North Carolina, Tennessee, Virginia and West Virginia; from the regular and Cooperative Project in Delaware, Maryland, North Carolina, South Carolina, Virginia and West Virginia; from the CCC Project in Maryland, Virginia and West Virginia.

Table 1. Giving Summary of Ribes Eradication Data for Southern Appalachian States for 1938 and for period 1918 to 1938 inclusive.

Year	Acres worked	Wild	Cult.	Number of Ribes Destroyed	
				Total	Number of man-days labor
1938	145,000	4,000,100	104,000	4,700,000	40,000
1918-37	480,000	10,000,000	900,000	17,000,000	150,000
1918 to 1938 inclusive	625,000	14,000,100	1,000,000	21,700,000	190,000

Year	No. Ribes bushes destroyed	Per Acre	Per man-day	Cost Data	
				Total	Per Acre
1938	110.4	0.40	.002	\$21,000.00	\$0.190
1918-37	110.4	0.8	.001	\$24,704.00	\$0.000
1918 to 1938	110.8	4.00	.002	\$25,704.00	\$0.000

Detailed Statistic on eradication figures by States for 1938 are to be found in Omnibus Statistical Tables I and IA, II and IIA, at the front of this report, while data on costs are to be found in Tables IV and IVA.

The table which follows shows the results of Ribes eradication by Projects.

Table 2. Giving summary of Ribes eradication data for Southern Appalachian States for 1938 and for 1918 to 1938 Inclusive.

Project	Acreage Worked	No. of Ribes Bushes Destroyed			Number 8 hour man-days
		Wild	Cult.	Total	
1938					
Regular and coop.	57,156	33,036	2,384	35,420	457
W. P. A.	666,874	4,332,740	152,459	4,485,199	37,966
C. C. C.	10,798	240,350	2	240,352	2,405
Total of all Projects	735,008	4,596,126	154,845	4,750,971	40,828
Total Emergency Projects	677,852	4,573,090	152,461	4,725,551	40,371
1918 to 1938 Regular	74,303	251,519	4,656	256,175	1,041
WPA	3,633,179	15,878,799	909,322	16,788,121	142,151
CCC	329,564	2,902,914	8,157	2,911,071	33,028
PWA	1,585,219	2,448,711	187,024	2,635,735	19,228
Total all Projects	5,622,265	21,481,943	1,109,159	22,591,102	195,448
Emergency Projects	5,547,962	21,230,424	1,104,503	22,334,927	194,407

Revised 12/1/1988 by [illegible]

IT, AT THE 1955 ANNUAL MEETING OF THE BOARD OF DIRECTORS OF THE

[illegible]

By Working

Local control in the region has been going on for 10 years in Virginia, and for six years in Maryland, West Virginia, North Carolina, Tennessee and Georgia. Ribes have sprung up after first working while some have been missed. These bushes have been taken out in second, third or even fourth working. In 1938, 90.3% of the eradication was initial work, 9.0% was second working, 0.4% was third working, and 0.3% was fourth working. In contrast to this in 1937, 67.6% of the work was initial, 31.9% second working, and 0.5% was third working. A comparison of acreage by working for past three years will be of interest.

Table 3. Showing Acreage Worked in 1936, 1937 and 1938 for the Southern Appalachian States, by Working

Year	First Working	Second Working	Third Working	Fourth Working	Total	Eradication Costs	
						Total	Per Acre
1936	1169,073	238,208	5,988	0	1413,269	\$103,712.11	0.089
1937	844,034	398,125	6,614	0	1248,773	99,239.82	0.117
1938	663,442	65,994	3,152	2,420	735,008	91,921.40	0.125

The higher cost of eradication per acre in 1938 over that of 1936 is due probably to a number of factors, including the working of lands less accessible, than lands worked in former years, and the large increase in 1938 of wages of laborers and foreman per month over the wages paid previously.

by working

Local control in the region has been reduced to 10 years in Virginia, and for six years in Maryland, West Virginia, North Carolina, Tennessee and Georgia. Since these states have been working while some have been closed, there has been a decrease in the amount of work, but it is not as much as it was in 1935. In 1935, 58.5% of the population was in the work force, and 0.5% was in the work force. In 1937, 57.5% of the work force was in the work force, and 0.5% was in the work force. In 1939, 51.5% of the work force was in the work force, and 0.5% was in the work force. A comparison of the work force in the past three years will be of interest.

Table 3. Working force in 1935, 1937 and 1939 for the Southern States, by State

Year	Total	Working	Not Working	Total	Working	Not Working
1935	11,000,000	6,500,000	4,500,000	11,000,000	6,500,000	4,500,000
1937	11,000,000	6,500,000	4,500,000	11,000,000	6,500,000	4,500,000
1939	11,000,000	6,500,000	4,500,000	11,000,000	6,500,000	4,500,000

The above table of working force in 1935 over that of 1939 is for the purpose of showing the working force in the Southern States, and is not for the purpose of showing the working force in the Southern States. The above table of working force in 1935 over that of 1939 is for the purpose of showing the working force in the Southern States, and is not for the purpose of showing the working force in the Southern States.

A Summary of Eradication by Working follows:

Table 4. Showing Summary of Ribes Eradication Data for Southern Appalachian States for 1938 and for period 1918 to 1938 Inclusive

Working	Acreage Worked	No. of Ribes Destroyed			Number 8 hour man-days
		Wild	Cult.	Total	
1938					
First	663,442	4,248,734	148,266	4,397,000	34,870
Second	65,994	304,402	3,815	308,217	4,635
Third	3,152	39,086	2,757	41,843	1,106
Fourth	2,420	3,904	7	3,911	217
Total All Workings	735,008	4,596,126	154,845	4,750,971	40,828
1918-1938					
First	4,855,221	19,167,240	1,030,511	20,197,751	163,996
Second	748,870	2,201,017	75,479	2,276,496	28,545
Third	15,754	109,782	3,162	112,944	2,690
Fourth	2,420	3,904	7	3,911	217
Total All Workings	5,622,265	21,481,943	1,109,159	22,591,102	195,448

Period	Percentages								per acre			
	Acreage Worked				Ribes				Man-days			
	1st Work	2nd Work	3rd Work	4th Work	1st Work	2nd Work	3rd Work	4th Work	1st Work	2nd Work	3rd Work	4th Work
1918-38	86.4	13.3	0.3	-	4.1	3.04	7.7	1.6	.034	.038	0.17	0.09
1938	90.3	9.0	0.4	0.3	6.62	4.65	13.3	1.6	.053	.07	0.35	0.09

A Summary of Irrigation by Working follows:
Table 1. Showing Summary of Above Irrigation from the
Southern Irrigation System for 1938 and for
period 1918 to 1938 inclusive

Working Irrigated	No. of Lines Irrigated	Total		Number of Lines Irrigated
		1918	1938	
1938				
Private	1,212,194	1,212,194	1,212,194	1,212,194
County	1,212,194	1,212,194	1,212,194	1,212,194
State	1,212,194	1,212,194	1,212,194	1,212,194
Federal	1,212,194	1,212,194	1,212,194	1,212,194
Total	1,212,194	1,212,194	1,212,194	1,212,194
1918-1938				
Private	1,212,194	1,212,194	1,212,194	1,212,194
County	1,212,194	1,212,194	1,212,194	1,212,194
State	1,212,194	1,212,194	1,212,194	1,212,194
Federal	1,212,194	1,212,194	1,212,194	1,212,194
Total	1,212,194	1,212,194	1,212,194	1,212,194

Comparison of Results in Ribes Eradication
In Southern Appalachian District
1935 to 1938

Year	Acreage Worked According to Working			
	Initial Work	Second Work	Third Work	Fourth Work
1938	663,442	65,994	3,152	2,420
1937	841,034	398,125	6,614	0
1936	1,169,073	238,208	5,986	0
1935	375,945	22,979	0	0
Up to 1934 inclusive	1,802,727	23,564	0	0
Grand Total	4,855,221	748,870	15,754	2,420

Year	Total Acreage Worked	Total No. of Ribes Removed	Number man-days	Cost
1938	735,008	4,750,971	40,828	\$ 89,705.00
1937	1,248,773	5,216,119	48,812	99,259.00
1936	1,413,269	5,804,474	44,717	103,712.00
1935	398,924	852,872	34,327	32,276.00
Up to 1934 inclusive	1,826,291	5,966,666	26,764	158,717.00
Grand Total	5,622,265	22,591,102	195,448	\$483,650.00

It will be seen from the above table that we worked the most acreage and secured the most Ribes bushes and spent the most money on Ribes eradication in the year 1936, and that each year since that time we have fallen off in acreage worked initially, acreage worked second, and third time, total acreage worked, number of bushes pulled and cost. It is realized that with \$14,000 less funds in 1938 on eradication and with approximately 3,900 man-days less than in 1936, we could not accomplish the same results either in acreage worked or bushes pulled.

While the total acreage worked in 1938 dropped off 42 percent, the number of Ribes bushes pulled only fell off 20%. This lesser acreage worked and number of Ribes removed is, of course partly accounted for by the lesser funds expended on the eradication. This amounted to a decrease of 13%. There was also a decrease in the number of man-days labor from 1936 to 1938 of 8%. A second reason for reduced acreage in 1938 is the fact that the more accessible areas were worked in earlier years, and that in this past year we have been mopping up areas and working the more remote inaccessible ones.

Year	Total Amount Borrowed	Total Amount of Bonds Issued	Number of Bonds	Cost
1900	\$1,125,000	\$1,125,000	10,000	\$112.50
1901	1,125,000	1,125,000	10,000	112.50
1902	1,125,000	1,125,000	10,000	112.50
1903	1,125,000	1,125,000	10,000	112.50
1904	1,125,000	1,125,000	10,000	112.50
1905	1,125,000	1,125,000	10,000	112.50
1906	1,125,000	1,125,000	10,000	112.50
1907	1,125,000	1,125,000	10,000	112.50
1908	1,125,000	1,125,000	10,000	112.50
1909	1,125,000	1,125,000	10,000	112.50
1910	1,125,000	1,125,000	10,000	112.50
1911	1,125,000	1,125,000	10,000	112.50
1912	1,125,000	1,125,000	10,000	112.50
1913	1,125,000	1,125,000	10,000	112.50
1914	1,125,000	1,125,000	10,000	112.50
1915	1,125,000	1,125,000	10,000	112.50
1916	1,125,000	1,125,000	10,000	112.50
1917	1,125,000	1,125,000	10,000	112.50
1918	1,125,000	1,125,000	10,000	112.50
1919	1,125,000	1,125,000	10,000	112.50
1920	1,125,000	1,125,000	10,000	112.50
1921	1,125,000	1,125,000	10,000	112.50
1922	1,125,000	1,125,000	10,000	112.50
1923	1,125,000	1,125,000	10,000	112.50
1924	1,125,000	1,125,000	10,000	112.50
1925	1,125,000	1,125,000	10,000	112.50
1926	1,125,000	1,125,000	10,000	112.50
1927	1,125,000	1,125,000	10,000	112.50
1928	1,125,000	1,125,000	10,000	112.50
1929	1,125,000	1,125,000	10,000	112.50
1930	1,125,000	1,125,000	10,000	112.50
1931	1,125,000	1,125,000	10,000	112.50
1932	1,125,000	1,125,000	10,000	112.50
1933	1,125,000	1,125,000	10,000	112.50
1934	1,125,000	1,125,000	10,000	112.50
1935	1,125,000	1,125,000	10,000	112.50
1936	1,125,000	1,125,000	10,000	112.50
1937	1,125,000	1,125,000	10,000	112.50
1938	1,125,000	1,125,000	10,000	112.50
1939	1,125,000	1,125,000	10,000	112.50
1940	1,125,000	1,125,000	10,000	112.50
1941	1,125,000	1,125,000	10,000	112.50
1942	1,125,000	1,125,000	10,000	112.50
1943	1,125,000	1,125,000	10,000	112.50
1944	1,125,000	1,125,000	10,000	112.50
1945	1,125,000	1,125,000	10,000	112.50
1946	1,125,000	1,125,000	10,000	112.50
1947	1,125,000	1,125,000	10,000	112.50
1948	1,125,000	1,125,000	10,000	112.50
1949	1,125,000	1,125,000	10,000	112.50
1950	1,125,000	1,125,000	10,000	112.50
1951	1,125,000	1,125,000	10,000	112.50
1952	1,125,000	1,125,000	10,000	112.50
1953	1,125,000	1,125,000	10,000	112.50
1954	1,125,000	1,125,000	10,000	112.50
1955	1,125,000	1,125,000	10,000	112.50
1956	1,125,000	1,125,000	10,000	112.50
1957	1,125,000	1,125,000	10,000	112.50
1958	1,125,000	1,125,000	10,000	112.50
1959	1,125,000	1,125,000	10,000	112.50
1960	1,125,000	1,125,000	10,000	112.50
1961	1,125,000	1,125,000	10,000	112.50
1962	1,125,000	1,125,000	10,000	112.50
1963	1,125,000	1,125,000	10,000	112.50
1964	1,125,000	1,125,000	10,000	112.50
1965	1,125,000	1,125,000	10,000	112.50
1966	1,125,000	1,125,000	10,000	112.50
1967	1,125,000	1,125,000	10,000	112.50
1968	1,125,000	1,125,000	10,000	112.50
1969	1,125,000	1,125,000	10,000	112.50
1970	1,125,000	1,125,000	10,000	112.50
1971	1,125,000	1,125,000	10,000	112.50
1972	1,125,000	1,125,000	10,000	112.50
1973	1,125,000	1,125,000	10,000	112.50
1974	1,125,000	1,125,000	10,000	112.50
1975	1,125,000	1,125,000	10,000	112.50
1976	1,125,000	1,125,000	10,000	112.50
1977	1,125,000	1,125,000	10,000	112.50
1978	1,125,000	1,125,000	10,000	112.50
1979	1,125,000	1,125,000	10,000	112.50
1980	1,125,000	1,125,000	10,000	112.50
1981	1,125,000	1,125,000	10,000	112.50
1982	1,125,000	1,125,000	10,000	112.50
1983	1,125,000	1,125,000	10,000	112.50
1984	1,125,000	1,125,000	10,000	112.50
1985	1,125,000	1,125,000	10,000	112.50
1986	1,125,000	1,125,000	10,000	112.50
1987	1,125,000	1,125,000	10,000	112.50
1988	1,125,000	1,125,000	10,000	112.50
1989	1,125,000	1,125,000	10,000	112.50
1990	1,125,000	1,125,000	10,000	112.50
1991	1,125,000	1,125,000	10,000	112.50
1992	1,125,000	1,125,000	10,000	112.50
1993	1,125,000	1,125,000	10,000	112.50
1994	1,125,000	1,125,000	10,000	112.50
1995	1,125,000	1,125,000	10,000	112.50
1996	1,125,000	1,125,000	10,000	112.50
1997	1,125,000	1,125,000	10,000	112.50
1998	1,125,000	1,125,000	10,000	112.50
1999	1,125,000	1,125,000	10,000	112.50
2000	1,125,000	1,125,000	10,000	112.50
2001	1,125,000	1,125,000	10,000	112.50
2002	1,125,000	1,125,000	10,000	112.50
2003	1,125,000	1,125,000	10,000	112.50
2004	1,125,000	1,125,000	10,000	112.50
2005	1,125,000	1,125,000	10,000	112.50
2006	1,125,000	1,125,000	10,000	112.50
2007	1,125,000	1,125,000	10,000	112.50
2008	1,125,000	1,125,000	10,000	112.50
2009	1,125,000	1,125,000	10,000	112.50
2010	1,125,000	1,125,000	10,000	112.50
2011	1,125,000	1,125,000	10,000	112.50
2012	1,125,000	1,125,000	10,000	112.50
2013	1,125,000	1,125,000	10,000	112.50
2014	1,125,000	1,125,000	10,000	112.50
2015	1,125,000	1,125,000	10,000	112.50
2016	1,125,000	1,125,000	10,000	112.50
2017	1,125,000	1,125,000	10,000	112.50
2018	1,125,000	1,125,000	10,000	112.50
2019	1,125,000	1,125,000	10,000	112.50
2020	1,125,000	1,125,000	10,000	112.50
2021	1,125,000	1,125,000	10,000	112.50
2022	1,125,000	1,125,000	10,000	112.50
2023	1,125,000	1,125,000	10,000	112.50
2024	1,125,000	1,125,000	10,000	112.50
2025	1,125,000	1,125,000	10,000	112.50
2026	1,125,000	1,125,000	10,000	112.50
2027	1,125,000	1,125,000	10,000	112.50
2028	1,125,000	1,125,000	10,000	112.50
2029	1,125,000	1,125,000	10,000	112.50
2030	1,125,000	1,125,000	10,000	112.50
2031	1,125,000	1,125,000	10,000	112.50
2032	1,125,000	1,125,000	10,000	112.50
2033	1,125,000	1,125,000	10,000	112.50
2034	1,125,000	1,125,000	10,000	112.50
2035	1,125,000	1,125,000	10,000	112.50
2036	1,125,000	1,125,000	10,000	112.50
2037	1,125,000	1,125,000	10,000	112.50
2038	1,125,000	1,125,000	10,000	112.50
2039	1,125,000	1,125,000	10,000	112.50
2040	1,125,000	1,125,000	10,000	112.50
2041	1,125,000	1,125,000	10,000	112.50
2042	1,125,000	1,125,000	10,000	112.50
2043	1,125,000	1,125,000	10,000	112.50
2044	1,125,000	1,125,000	10,000	112.50
2045	1,125,000	1,125,000	10,000	112.50
2046	1,125,000	1,125,000	10,000	112.50
2047	1,125,000	1,125,000	10,000	112.50
2048	1,125,000	1,125,000	10,000	112.50
2049	1,125,000	1,125,000	10,000	112.50
2050	1,125,000	1,125,000	10,000	112.50
2051	1,125,000	1,125,000	10,000	112.50
2052	1,125,000	1,125,000	10,000	112.50
2053	1,125,000	1,125,000	10,000	112.50
2054	1,125,000	1,125,000	10,000	112.50
2055	1,125,000	1,125,000	10,000	112.50
2056	1,125,000	1,125,000	10,000	112.50
2057	1,125,000	1,125,000	10,000	112.50
2058	1,125,000	1,125,000	10,000	112.50
2059	1,125,000	1,125,000	10,000	112.50
2060	1,125,000	1,125,000	10,000	112.50
2061	1,125,000	1,125,000	10,000	112.50
2062	1,125,000	1,125,000	10,000	112.50
2063	1,125,000	1,125,000	10,000	112.50
2064	1,125,000	1,125,000	10,000	112.50
2065	1,125,000	1,125,000	10,000	112.50
2066	1,125,000	1,125,000	10,000	112.50
2067	1,125,000	1,125,000	10,000	112.50
2068	1,125,000	1,125,000	10,000	112.50
2069	1,125,000	1,125,000	10,000	112.50
2070	1,125,000	1,125,000	10,000	112.50
2071	1,125,000	1,125,000	10,000	112.50
2072	1,125,000	1,125,000	10,000	112.50
2073	1,125,000	1,125,000	10,000	112.50
2074	1,125,000	1,125,000	10,000	112.50
2075	1,125,000	1,125,000	10,000	112.50
2076	1,125,000	1,125,000	10,000	112.50
2077	1,125,000	1,125,000	10,000	112.50
2078	1,125,000	1,125,000	10,000	112.50
2079	1,125,000	1,125,000	10,000	112.50
2080	1,125,000	1,125,000	10,000	112.50
2081	1,125,000	1,125,000	10,000	112.50
2082	1,125,000	1,125,000	10,000	112.50
2083	1,125,000	1,125,000	10,000	112.50
2084	1,125,000	1,125,000	10,000	112.50
2085	1,125,000	1,125,000	10,000	112.50
2086	1,125,000	1,125,000	10,000	112.50
2087	1,125,000	1,125,000	10,000	112.50
2088	1,125,000	1,125,000	10,000	112.50
2089	1,125,000	1,125,000	10,000	112.50
2090	1,125,000	1,125,000	10,000	112.50
2091	1,125,000	1,125,000	10,000	112.50
2092	1,125,000	1,125,000	10,000	112.50
2093	1,125,000	1,125,000	10,000	112.50
2094	1,125,000	1,125,000	10,000	112.50
2095	1,125,000	1,125,000	10,0	

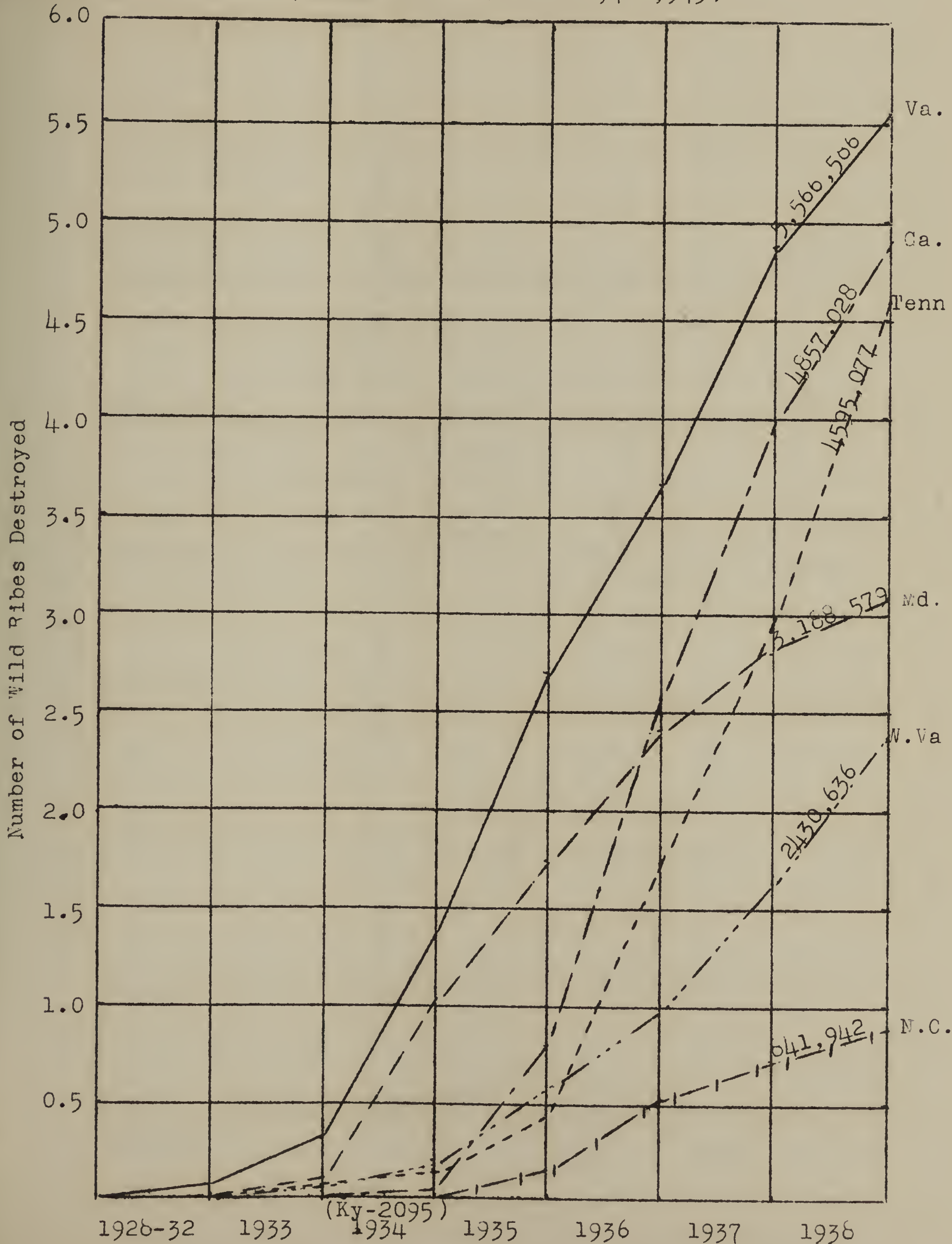
It will be seen from the above table that we worked the most savings and secured the most sales during and about the next money on these conditions in the year 1950, and that each year since that time we have fallen off in savings worked initially, savings worked second, and third time, total savings worked, number of houses pulled and cost. It is realized that with \$14,000 less funds in 1950 an expenditure and with approximately \$400 more a year than in 1950, we could not accomplish the same results either in savings worked or houses pulled.

While the total number worked in 1953 dropped off 12 percent, the number of older female police only fell 20%. This latter change worked and number of older removed 14.6 of course partly accounted for by the lesser funds expended on the transition. This seemed to a decrease of 13%. There was also a decrease in the number of one-day labor from 1952 to 1953 of 8. A second reason for reduced average is 1953 is the fact that the more experienced ones were worked in earlier years, and that in this year no new men working in areas and working the more remote installations.

GRAPH SHOWING NUMBER OF WILD RIBES DESTROYED
IN THE SOUTHERN APPALACHIAN STATES BY YEARS 1928-1938 INCLUSIVE

Millions

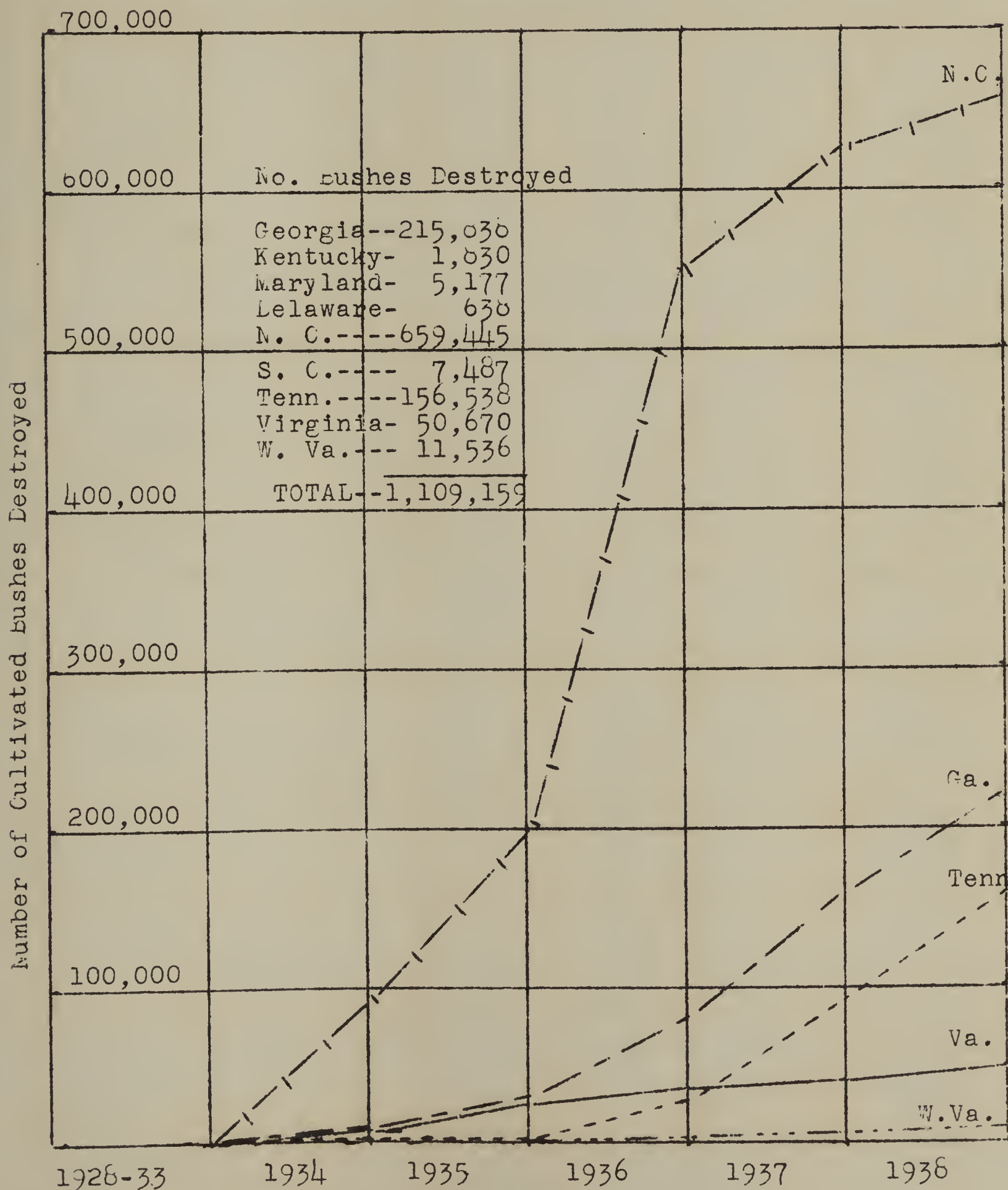
(TOTAL FOR REGION - 21,481,943)





GRAPH SHOWING NUMBER OF CULTIVATED RIBES DESTROYED IN THE
SOUTHERN APPALACHIAN STATES BY YEARS 1928 - 1938 INCLUSIVE

(TOTAL FOR REGION - 1,109,159)



BLISTER RUST CONTROL WORK
PERFORMED ON NATIONAL FOREST LANDS - SOUTHERN APPALACHIAN STATES

1938 to 1938 Inclusive

STATE	Acreage National Forest Land in Control Area	Calendar Year	Acreage Eradicated of Ribes by Forest Service			Bureau			Total Acreage Eradicated of Ribes by both Agencies			Accumulative Totals			Total Acreage Worked by Years, 1st 2nd and 3rd Workings
			1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	
Virginia up to 1932 inclusive			4,508	1,014	0	0	0	0	4,508	1,014	0	4,508	1,014	0	5,522
Georgia		1933	8,112	0	0	0	0	0	8,112	0	0	0	0	0	8,112
North Carolina			27,560	0	0	0	0	00	27,560	0	0	00	0	0	27,560
South Carolina			425	0	0	0	0	0	425	0	0	0	0	0	425
Tennessee			8,895	0	0	0	0	0	8,895	0	0	0	0	0	8,895
Virginia			9,301	1,380	0	0	0	0	9,301	1,380	0	0	0	0	10,681
West Virginia			606	0	0	0	0	0	606	0	0	0	0	0	606
Totals			54,899	1,380	0	0	0	0	54,899	1,380	0	59,407	2,394	0	56,279
Georgia		1934	6,642	0	0	0	0	0	6,642	0	0	0	0	0	6,642
North Carolina			24,598	0	0	0	0	0	24,598	0	0	0	0	0	24,598
South Carolina			0	0	0	2,575	425	0	2,575	425	0	0	0	0	3,000
Tennessee			11,970	0	0	0	0	0	11,970	0	0	0	0	0	11,970
Virginia			3,562	3,586	0	0	0	0	3,562	3,586	0	0	0	0	7,148
West Virginia			1,569	435	0	0	0	0	1,569	435	0	0	0	0	2,004
Totals			48,341	4,021	0	2,575	425	0	50,916	4,446	0	110,323	6,840	0	55,362
Georgia		1935	0	0	0	125,976	0	0	125,976	0	0	0	0	0	125,976
Virginia			6,912	0	0	0	0	0	6,912	0	0	0	0	0	6,912
West Virginia			6,931	0	0	0	0	0	6,931	0	0	0	0	0	6,931
Totals			13,843	0	0	125,976	0	0	138,812	0	0	250,142	6,840	0	139,819
Georgia		1936	0	0	0	73,655	0	0	73,655	0	0	0	0	0	73,655
North Carolina			0	0	0	0	29,332	0	0	29,332	0	0	0	0	29,332
Tennessee			180	0	0	680	0	0	860	0	0	0	0	0	860
Virginia			292	0	0	15,804	1,391	0	15,896	1,391	0	0	0	0	17,287
West Virginia			12,396	447	0	5,090	0	0	17,486	447	0	0	0	0	17,933
Totals			12,868	447	0	95,029	30,723	0	107,897	31,170	0	358,039	38,010	0	139,067
Georgia		1937	0	0	0	49,381	1,250	0	49,381	1,250	0	0	0	0	50,631
North Carolina			590	31,861	0	95,228	13,917	0	95,818	45,778	0	0	0	0	141,596
Tennessee			0	0	0	47,045	0	0	47,045	0	0	0	0	0	47,045
Virginia			0	0	0	25,998	12,010	3380	25,998	12,010	3380	0	0	0	41,388
West Virginia			8,151	496	0	42,461	2,756	0	50,612	3,252	0	0	0	0	53,864
Totals			8,741	32,357	0	260,113	29,933	3380	268,854	62,290	3380	628,893	100,300	3380	334,524

State		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030	
Georgia	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030																																																																																																				
North Carolina	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030																																																																																																				
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Tennessee	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030																																																																																																				
Virginia	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030																																																																																																				
West Virginia	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030																																																																																																				
Totals	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030																																																																																																				

BLISTER RUST CONTROL WORK

PERFORMED ON NATIONAL FOREST LANDS - SOUTHERN APPALACHIAN STATES

1928 to 1938 Inclusive

STATE	Acreage National Forest Land in Control Area	Calendar Year	Acreage Eradicated of Ribes by						Total Acreage Eradicated of Ribes by both Agencies			Accumulative Totals			Total Acreage Worked by Years, 1st, 2nd & 3rd Workings
			Forest Service			Bureau			1st	2nd	3rd	1st	2nd	3rd	
			1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	
Georgia		1938	0	0	0	75,975	0	0	75,975	0	0	0	0	0	75,975
North Carolina			0	0	0	29,710	24,997	2	29,710	24,997	2	0	0	0	54,709
South Carolina			0	0	0	700	0	0	700	0	0	0	0	0	700
Tennessee			0	0	0	54,388	0	0	54,388	0	0	0	0	0	54,388
Virginia			0	0	0	29,762	2,956	2,700	29,762	2,956	2,700	0	0	0	35,418
West Virginia			459	0	0	9,389	0	0	9,848	0	0	0	0	0	9,848
Totals			459	0	0	199,924	27,953	2,702	200,383	27,953	2,702	827,276	128,253	6,082	231,038
GRAND TOTAL			143,659	39,219	0	683,617	89,034	6,082	827,276	128,253	6,082	827,276	128,253	6,082	961,611

[illegible]

BLINDEN HUNT CONTROL WORK

PERFORMANCE ON NATIONAL FOREST LINES - SOUTHERN APPALACHIAN STATES IN 1938

STATE	Acreage National Forest Land in Control Area (3)	Acreage Graduated of Lines by Forest Service						Total Acreage Graduated of Lines by Both Agencies			Total Acreage Worked in 1938, 1st 2nd and 3rd Workings
		1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	1st Working	2nd Working	3rd Working	
Georgia	350,000				75,975			75,975			75,975
North Carolina	180,000				29,710 (1)	24,997 (1)	2	29,710	24,997	2	54,709
South Carolina	3,700				700			700	0	0	700
Tennessee	130,000				54,300	0	0	54,300	0	0	54,300
Virginia	100,000				29,762	2,956	2700 (2)	29,762	2,956	2,700	35,418
West Virginia	90,000	459			9,589	-	-	9,588	-	-	9,588
Total	853,700 (3)	459			199,924	27,953	2702	200,583	27,953	2,702	231,038

(1) Includes 9,383 acres (1st) and 24,992 (2nd) worked by State.

(2) Includes 23 acres worked by Girl Scouts

(3) Estimate January 1st, 1938 was 774,250 for total area of control in National Forests. By December 31, 1938 there had been worked initially 227,276 acres in National Forests making it necessary to raise figures of control area

STATE	Accumulative Totals of 1st Working 1928 - 1938 Inclusive	Estimated Unworked Acreage
Georgia	359,741	10,259
North Carolina	177,636	2,314
South Carolina	3,700	-
Tennessee	125,158	6,042
Virginia	95,539	4,061
West Virginia	57,052	2,948
Accumulative Totals	827,276	26,424

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OF AGRICULTURE

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK	BALANCE
10/1/78	Initial deposit	100.00		First National	100.00
10/15/78	Payroll	50.00	101	First National	50.00
10/20/78	Office supplies	10.00	102	First National	40.00
10/25/78	Travel	25.00	103	First National	15.00
10/30/78	Interest	5.00		First National	20.00
11/5/78	Payroll	50.00	104	First National	70.00
11/10/78	Office supplies	10.00	105	First National	60.00
11/15/78	Travel	25.00	106	First National	35.00
11/20/78	Interest	5.00		First National	40.00
11/25/78	Payroll	50.00	107	First National	90.00
11/30/78	Office supplies	10.00	108	First National	80.00
12/5/78	Travel	25.00	109	First National	55.00
12/10/78	Interest	5.00		First National	60.00
12/15/78	Payroll	50.00	110	First National	110.00
12/20/78	Office supplies	10.00	111	First National	100.00
12/25/78	Travel	25.00	112	First National	75.00
12/30/78	Interest	5.00		First National	80.00
1/5/79	Payroll	50.00	113	First National	130.00
1/10/79	Office supplies	10.00	114	First National	120.00
1/15/79	Travel	25.00	115	First National	95.00
1/20/79	Interest	5.00		First National	100.00
1/25/79	Payroll	50.00	116	First National	150.00
1/30/79	Office supplies	10.00	117	First National	140.00
2/5/79	Travel	25.00	118	First National	115.00
2/10/79	Interest	5.00		First National	120.00
2/15/79	Payroll	50.00	119	First National	170.00
2/20/79	Office supplies	10.00	120	First National	160.00
2/25/79	Travel	25.00	121	First National	135.00
2/28/79	Interest	5.00		First National	140.00
3/5/79	Payroll	50.00	122	First National	190.00
3/10/79	Office supplies	10.00	123	First National	180.00
3/15/79	Travel	25.00	124	First National	155.00
3/20/79	Interest	5.00		First National	160.00
3/25/79	Payroll	50.00	125	First National	210.00
3/30/79	Office supplies	10.00	126	First National	200.00
4/5/79	Travel	25.00	127	First National	175.00
4/10/79	Interest	5.00		First National	180.00
4/15/79	Payroll	50.00	128	First National	230.00
4/20/79	Office supplies	10.00	129	First National	220.00
4/25/79	Travel	25.00	130	First National	195.00
4/28/79	Interest	5.00		First National	200.00
5/5/79	Payroll	50.00	131	First National	250.00
5/10/79	Office supplies	10.00	132	First National	240.00
5/15/79	Travel	25.00	133	First National	215.00
5/20/79	Interest	5.00		First National	220.00
5/25/79	Payroll	50.00	134	First National	270.00
5/30/79	Office supplies	10.00	135	First National	260.00
6/5/79	Travel	25.00	136	First National	235.00
6/10/79	Interest	5.00		First National	240.00
6/15/79	Payroll	50.00	137	First National	290.00
6/20/79	Office supplies	10.00	138	First National	280.00
6/25/79	Travel	25.00	139	First National	255.00
6/28/79	Interest	5.00		First National	260.00
7/5/79	Payroll	50.00	140	First National	310.00
7/10/79	Office supplies	10.00	141	First National	300.00
7/15/79	Travel	25.00	142	First National	275.00
7/20/79	Interest	5.00		First National	280.00
7/25/79	Payroll	50.00	143	First National	330.00
7/30/79	Office supplies	10.00	144	First National	320.00
8/5/79	Travel	25.00	145	First National	295.00
8/10/79	Interest	5.00		First National	300.00

1	Estimated 1,100 cases (100) and 20,000 (100) cases of disease
2	Estimated 10 cases (100) and 20,000 (100) cases of disease
3	Estimated 10 cases (100) and 20,000 (100) cases of disease

BLISTER RUST CONTROL WORK
PERFORMED ON NATIONAL PARK LANDS - SOUTHERN APPALACHIAN STATES
1933 to 1938 Inclusive

State	Acreage of white pine	Calendar Year	Acreage Worked by Park Service		Acreage Worked by Bureau		Total Acreage Worked by Both Agencies		Accumulative Totals		Total Acreage Worked by years 1st and 2nd workings
			First Working	Second Working	First Working	Second Working	First Working	Second Working	First Working	Second Working	
North Carolina	16,545	1933	2,010	-			2,010	-	2,010		2,010
		1937	-		12,275	2,010	12,275	2,010	14,285	2,010	14,285
Totals	16,545		2,010		12,275	2,010	14,285	2,010	14,285	2,010	16,295
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Tennessee	2,000	1933	1,825				1,825		1,825		1,825
Total			1,825				1,825		1,825		1,825
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Virginia	26,040	1933	3,958				3,958		3,958		3,958
		1934	6,866	83			6,866	83	10,824	83	6,949
		1935	12,460	251			12,460	251	23,284	334	12,711
		1936	1,741	959	400	269	2,141	1,228	25,425	1,562	3,369
		1937	130	0	485	0	615	0	26,040	1,562	615
		1938	0	720	0	2	0	722	26,040	2,284	722
Total	44,585		25,155	2,013	885	271	26,040	2,284	26,040	2,284	28,324

State of Tennessee	Department of Transportation	Division of Highways	Section of Planning and Design	Office of the Chief Engineer	Office of the Assistant Chief Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District 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Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer	Office of the District Engineer
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BLISTER MUST CONTROL WORK PERFORMED ON RESETTLEMENT (Federal) Lands - Maryland

Cal. Year	Acreage Worked by Resettlement Adm.			Acreage Worked by Bureau			Total Acreage Worked by Both Agencies			Accumulative Totals			Total Acres Worked by years 1st, 2nd and 3rd.
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	
	Working	Working	Working	Wkng.	Working	Wkng.	Working	Wkng.	3rd	Working	Wkng.	Wkng.	
1936	185	0	0	-	-	-	185	0	0	185	0	0	185
1937	465			275			740			925			740
1938	0				230	-	0	230	0	925	230	0	230
Total	650			275	230		740	230		925	230		1,155

Inventory - School (Lynchburg) - TRANSLATION OF QUANTITIES AND LOCATIONS THIS WEEK

Index	Physical Inventory		Physical Inventory		Physical Inventory		Physical Inventory		Physical Inventory	
	Box	Box	Box	Box	Box	Box	Box	Box	Box	Box
001	0	0	001	0	001	0	001	0	001	0
040	0	0	040	0	040	0	040	0	040	0
050	0	0	050	0	050	0	050	0	050	0
061	0	0	061	0	061	0	061	0	061	0
062	0	0	062	0	062	0	062	0	062	0
063	0	0	063	0	063	0	063	0	063	0
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072	0	0	072	0	072	0	072	0	072	0
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074	0	0	074	0	074	0	074	0	074	0
075	0	0	075	0	075	0	075	0	075	0
076	0	0	076	0	076	0	076	0	076	0
077	0	0	077	0	077	0	077	0	077	0
078	0	0	078	0	078	0	078	0	078	0
079	0	0	079	0	079	0	079	0	079	0
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082	0	0	082	0	082	0	082	0	082	0
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087	0	0	087	0	087	0	087	0	087	0
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095	0	0	095	0	095	0	095	0	095	0
096	0	0	096	0	096	0	096	0	096	0
097	0	0	097	0	097	0	097	0	097	0
098	0	0	098	0	098	0	098	0	098	0
099	0	0	099	0	099	0	099	0	099	0
100	0	0	100	0	100	0	100	0	100	0

TABLE I DELAWARE Summary of Ribes Eradication in 1938 By Working, Project and Ownership

By Working	Acreage Worked	No. of Ribes Destroyed			Number 8 hour man- days	Total Cost	No. Acres Per Man-days	Per Acre		
		Wild	Culti.	Total				No. Ribes	Number Man-days	Cost
First	1,076	-	638	638	43	294.92	2.5	0.593	0.0399	0.273
Second	None									
Third	none									
Total	1,076		638	638		294.92	2.5	0.593	0.0399	0.273
<u>By Project</u>										
Regular			32	32		-	-	-	-	-
W. P. A.	1,076		606	606	43	294.92	.25	0.56		
Total	1,076		638	638	43	294.92	25	0.593	0.0399	0.273
<u>By Ownership</u>										
Federal	None									
Municipal	570		40	40	6	41.10	9.5	0.07	0.0165	0.072
Private	506		598	598	37	253.82	13.7	1.18	0.073	.501
Total	1,076		638	638	43	294.92	.25	0.593	0.0399	0.273

Note. No previous eradication was carried on in Delaware as a Federal Project, although numerous European black currants were destroyed.

[illegible][illegible]

NOTE. No previous examination was advised to the Bureau. Numerous specimens have been destroyed.

GEORGIA, 1933

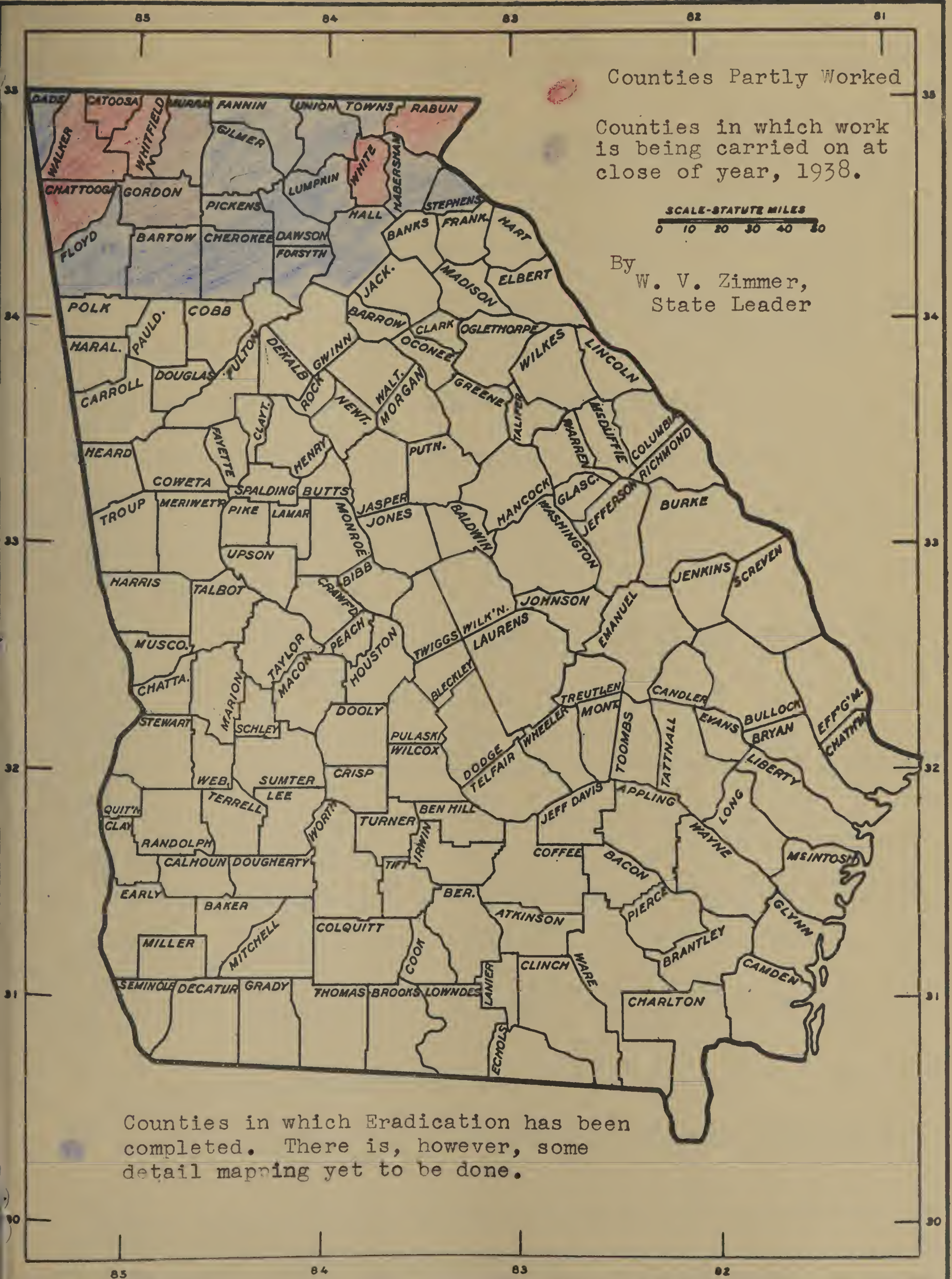


TABLE I. GEORGIA Summary of Ribes Eradication in 1938 By Working Project and Ownership

	Acreage Worked	Number Ribes Destroyed			Number 8 hour man- days	Total Cost	Number Acres per man- days	Per Acre		
		Wild	Culti.	Total				No. Ribes	Number Man days	Cost
By Working										
First	89,925	769,541	53,786	823,321	5,098	\$ 8,870.52	17.6	9.15	0.056	0.098
Second	8,500	90,155	-	90,155	909	1,581.01	9.6	10.6	0.107	0.186
<hr/>										
Total	98,425	859,696	53,786	913,482	6,007	10,451.53	16.4	9.28	0.061	0.104
<hr/>										
By Project										
Regular	none									
WPA	98,425	859,696	53,786	913,482	6,007	10,451.53	16.4	9.28	0.061	0.104
CCC	None									
<hr/>										
Total	98,425	859,696	53,786	913,482	6,007	10,451.53	16.4	9.28	0.061	0.104
<hr/>										
By Ownership										
Federal	75,975	530,145	45,100	575,245	4,284	7,454.16	17.7	7.5	0.056	0.098
State	2,318	75,840	-	75,840	299	520.26	7.7	32.7	0.129	0.224
Private	20,132	253,711	8,686	262,397	1,424	2,477.11	14.1	13.0	0.071	0.123
<hr/>										
Total	98,425	859,696	53,786	913,482	6,007	\$10,451.53	16.4	9.28	0.061	0.104

Category	Sub-category	1970-71		1971-72	
		Value	Percentage	Value	Percentage
By Province	First	1,234,567	12.34%	1,345,678	13.45%
	Second	2,345,678	23.45%	2,456,789	24.56%
	Total	3,580,245	35.79%	3,802,467	38.01%
By Region	North	1,567,890	15.67%	1,678,901	16.78%
	South	2,012,345	20.12%	2,123,456	21.23%
	Total	3,580,245	35.79%	3,802,467	38.01%
By District	Urban	1,890,123	18.90%	1,901,234	19.01%
	Rural	1,690,122	16.90%	1,701,233	17.01%
	Total	3,580,245	35.79%	3,802,467	38.01%

TABLE 2. GEORGIA Summary of Ribes Eradication By Working, Project and Year from 1933 to 1938

CLASSIFI- CATION	Year	Acres	No. of Ribes Destroyed			Total Man-Days labor	Total Cost	No. Acres per man- days	Per Acre		
			Wild	Culti.	Total				No. Ribes	No. man- days	Cost
Working First	1933	8,851	0	-	-	40	\$ 162.65	221.	0	0.004	\$0.018
	1934	133,362	0	12,744	12,744	468	3,907.37	283.	0.09	0.003	0.029
	1935	173,097	832,193	16,418	848,611	3,169	10,087.68	54.6	4.90	0.018	0.058
	1936	108,950	1,734,447	46,571	1,781,018	3,350	8,700.04	32	16.35	0.030	0.079
	1937	60,881	1,210,362	85,660	1,296,022	6,105	8,279.55	9.8	21.2	0.10	0.136
	1938	89,925	769,541	53,786	823,321	5,098	8,370.52	17.6	9.15	0.056	0.098
Totals		575,066	4,546,543	215,179	4,761,722	18,230	40,007.81	31.2	8.28	0.032	0.069
Second	1935	-	-	659	659	68	217.60	-	-	-	-
	1936	155	29,858	-	29,858	300	350.00	0.51	192.5	1.93	2.26
	1937	3,775	190,472	-	190,472	1,485	2,758.59	2.54	50.4	0.39	0.73
	1938	8,500	90,155	-	90,155	909	1,581.01	9.36	10.6	0.107	0.18
Totals		12,430	310,485	659	311,144	2,762	4,907.20	4.5	25.1	2.23	0.395
Both Workings Grand Totals		587,496	4,857,028	215,838	5,072,866	20,992	44,915.01	28.0	8.62	0.035	0.084
Project WPA	1935	124,122	828,042	8,719	836,761	2,961	7,603.78	41.9	6.74	.024	\$0.061
	1936	109,105	1,764,305	46,571	1,810,876	3,650	9,050.04	29.9	16.6	0.033	0.083
	1937	64,656	1,400,834	85,660	1,486,494	7,590	11,038.14	8.5	22.9	0.12	0.17
	1938	98,425	859,696	53,786	913,482	6,007	10,451.53	16.4	9.28	0.061	0.106
Totals		396,308	4,852,877	194,736	5,047,613	20,208	38,143.49	18.9	12.73	0.055	0.096
ECW	1933	8,851	-	-	-	40	162.65	221.	0	0.004	0.018
	1934	6,642	-	235	235	11	119.01	604.	0.035	0.0016	0.018
Total		15,493	-	235	235	51	281.66	303	0.015	0.0033	0.018
ECW	1934	126,720	-	12,509	12,509	457	3,780.36	277	0.099	0.0036	0.029
	1935	48,975	4,151	8,358	12,509	276	2,701.50	177	0.25	0.0056	0.056
Totals		175,695	4,151	20,867	25,018	735	6,489.86	240	0.142	0.0042	0.036
All Projects GRAND TOTAL		587,496	4,857,028	215,838	5,072,866	20,992	44,915.01	28.0	8.62	0.035	0.084

Category	Year	No. of children		Total
		1984-85	1985-86	
Operating	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Capital	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Total				
Operating	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Capital	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Total				
Operating	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Capital	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Total				
Operating	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Capital	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
	1985-86	1,234	1,234	2,468
	1984-85	1,234	1,234	2,468
Total				

TABLE 3

Summary of Ribes Eradication in Georgia, by Ownership and by Year from 1933 to 1938 Inclusive

Ownership	Year	Acres	No. of Ribes Destroyed			Total Man- Days Labor	Total Cost	Per Acre		
			Wild	Culti.	Total			No. Ribes	No. of Man- Days	Cost
National Forests										
" Chattahoochee	1933	8,112		0	0	40	\$ 147.90	0	-	\$0.018
	1934	6,642		235	235	11	119.01	0.035	-	0.018
	1935	125,976	736,585	1,321	737,906	2,027	7,308.00	5.86	0.016	0.058
	1936	73,655	1542,896	25,690	1,568,586	3,350	6,154.00	21.3	0.045	0.083
	1937	50,631	996,774	42,305	1,039,079	5,089	7,366.14	20.5	0.10	0.14
	1938	75,975	530,145	45,100	575,245	4,284	7,454.16	7.5	0.056	0.098
Totals		340,991	3806,400	114,651	3,921,051	14,801	28,549.21	11.5	0.043	0.083
State	1935	125	11,337	0	11,337	31	76.88	90.7	0.248	0.615
	1936	No work								
	1937	25	3,110	0	3,100	21	32.13	124.4	0.84	1.285
	1938	2,318	75,840	0	75,840	299	520.26	32.7	0.129	0.224
Totals		2,468	90,287	0	90,287	351	629.27	36.5	0.142	0.255
Private	1933	739	0	0	0	Incl. with Nat'l Forests	14.75	0	-	.0195
	1934	126,720	0	12,509	12,509	457	3,788.36	0.099	.0036	.031
	1935	46,996	84,271	15,756	100,027	1,179	2,920.40	2.13	.025	.062
	1936	35,450	221,409	20,881	242,290	300	2,896.04	6.82	.0085	.082
	1937	14,000	400,950	43,355	444,305	2,480	3,639.87	31.7	.177	.26
	1938	20,132	253,711	8,686	262,397	1,424	2,477.11	13.0	.071	.123
		244,037	960,341	101,187	1,061,528	5,840	\$15,736.53	4.34	.024	.064
GRAND Tot. All Lands		587,496	4,857,028	215,838	5,072,866	20,992	\$44,915.01	8.62	0.035	0.084

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Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

TABLE 4

Summary of Ribes Eradication in Georgia, by Working, Project, Ownership and Year,
from 1933 to 1938 Inclusive

Classification	Acreage Worked	No. of Ribes Destroyed			Number 8 hour man-days	Total Cost	Per Acre		
		Wild	Culti.	Total			Number Ribes	No. Man Days	Cost
<u>By Working</u>									
First	575,066	4,546,543	215,179	4,761,722	18,230	\$40,007.81	8.28	0.032	\$0.069
Second	12,430	310,485	659	311,144	2,762	4,907.20	25.1	2.23	0.395
Totals	587,496	4,857,028	215,838	5,072,866	20,992	44,915.01	8.62	0.035	0.084
<u>By Project</u>									
WPA	396,308	4,852,877	194,736	5,047,613	20,208	38,143.49	12.73	0.055	0.096
CCC	15,493	-	235	235	51	281.66	.015	0.0033	0.018
PWA	175,695	4,151	20,867	25,018	733	6,489.86	0.142	0.0042	0.036
Totals	587,496	4,857,028	215,838	5,072,866	20,992	44,915.01	8.62	0.035	0.084
<u>By Ownership</u>									
National Forest	340,991	3,806,400	114,651	3,921,051	14,801	28,549.21	11.5	0.043	0.083
State	2,468	90,287	0	90,287	351	629.27	36.5	0.142	0.255
Private	244,037	960,341	101,187	1,061,528	5,840	15,736.53	4.34	0.024	0.044
Totals	587,496	4,857,028	215,838	5,072,866	20,992	44,915.01	8.62	0.035	0.084
<u>By Year</u>									
1933	8,851	-	-	-	40	162.65	-	0.004	-
1934	133,362	-	12,744	12,744	468	3,907.37	.096	0.0035	0.029
1935	173,097	832,193	17,077	849,270	3,237	10,305.28	4.9	0.018	0.059
1936	109,105	1,764,305	46,571	1,810,876	4,650	9,050.04	16.6	0.033	0.083
1937	64,656	1,400,834	85,660	1,486,494	7,590	11,038.14	22.9	0.12	0.17
1938	98,425	859,696	53,786	913,482	6,007	10,451.53	9.28	0.061	0.104
Totals	587,496	4,857,028	215,838	5,072,866	20,992	44,915.01	8.62	0.035	0.084

TABLE 1 Maryland

Summary of Ribes Eradication in 1938, By Working, Project and Ownership

Classification	Acreage Worked	No. of Ribes Destroyed			Number 8 hour man-days	Total Cost	No. Acres			
		Wild	Culti.	Total			Per Man- Day	No. Ribes	Per Acre Number M-Days	Cost
By Working										
First	3,389	301,774	151	301,925	1,649	\$4,031.09	205	88.0	0.48	119
Second	817	91,588	minus 4	91,584	504	1,416.70	161	112.0	0.61	173
Third	340	8,665	0	8,665	124	348.40	274	25.0	0.36	102
Fourth	2,420	3,904	7	3,911	217	271.00	11.2	1.6	0.085	0.11
Totals	6,966	405,931	154	406,085	2,494	6,067.19	2.79	58.3	0.36	0.87
By Project										
Regular	980	68	48	116	2	2.25	490.0	.18	0.002	.002
W. P. A.	3,094	380,337	106	380,443	1,901	5,339.94	1.63	123.0	0.614	172
C. C. C.	2,892	25,526	-	25,526	591	725.00	4.9	8.8	0.204	25
Totals	6,966	405,931	154	406,085	2,494	6,067.19	2.79	58.3	0.36	0.87
By Ownership										
Federal Resettlement Lands	230	16,925		16,925	89	250.55	2.58	73.5	0.38	109
State Lands	4,474	96,295	49	96,344	1,312	2745.29	3.41	21.5	0.29	061
Municipal Lands	440	-	41	41	-	-	-	-	-	-
Private Lands	1,822	292,711	64	292,775	1,093	3,071.35	1.65	159.	0.59	168
Totals	6,966	405,931	154	406,085	2,494	6,067.19	2.79	58.3	0.36	0.87

Classification		Area of land irrigated	
Total		Total	
1. 1st class	1,000,000	1,000,000	1,000,000
2. 2nd class	500,000	500,000	500,000
3. 3rd class	250,000	250,000	250,000
4. 4th class	125,000	125,000	125,000
5. 5th class	62,500	62,500	62,500
6. 6th class	31,250	31,250	31,250
7. 7th class	15,625	15,625	15,625
8. 8th class	7,812	7,812	7,812
9. 9th class	3,906	3,906	3,906
10. 10th class	1,953	1,953	1,953
11. 11th class	976	976	976
12. 12th class	488	488	488
13. 13th class	244	244	244
14. 14th class	122	122	122
15. 15th class	61	61	61
16. 16th class	30	30	30
17. 17th class	15	15	15
18. 18th class	7	7	7
19. 19th class	3	3	3
20. 20th class	1	1	1
21. 21st class	0	0	0
22. 22nd class	0	0	0
23. 23rd class	0	0	0
24. 24th class	0	0	0
25. 25th class	0	0	0
26. 26th class	0	0	0
27. 27th class	0	0	0
28. 28th class	0	0	0
29. 29th class	0	0	0
30. 30th class	0	0	0
31. 31st class	0	0	0
32. 32nd class	0	0	0
33. 33rd class	0	0	0
34. 34th class	0	0	0
35. 35th class	0	0	0
36. 36th class	0	0	0
37. 37th class	0	0	0
38. 38th class	0	0	0
39. 39th class	0	0	0
40. 40th class	0	0	0
41. 41st class	0	0	0
42. 42nd class	0	0	0
43. 43rd class	0	0	0
44. 44th class	0	0	0
45. 45th class	0	0	0
46. 46th class	0	0	0
47. 47th class	0	0	0
48. 48th class	0	0	0
49. 49th class	0	0	0
50. 50th class	0	0	0
51. 51st class	0	0	0
52. 52nd class	0	0	0
53. 53rd class	0	0	0
54. 54th class	0	0	0
55. 55th class	0	0	0
56. 56th class	0	0	0
57. 57th class	0	0	0
58. 58th class	0	0	0
59. 59th class	0	0	0
60. 60th class	0	0	0
61. 61st class	0	0	0
62. 62nd class	0	0	0
63. 63rd class	0	0	0
64. 64th class	0	0	0
65. 65th class	0	0	0
66. 66th class	0	0	0
67. 67th class	0	0	0
68. 68th class	0	0	0
69. 69th class	0	0	0
70. 70th class	0	0	0
71. 71st class	0	0	0
72. 72nd class	0	0	0
73. 73rd class	0	0	0
74. 74th class	0	0	0
75. 75th class	0	0	0
76. 76th class	0	0	0
77. 77th class	0	0	0
78. 78th class	0	0	0
79. 79th class	0	0	0
80. 80th class	0	0	0
81. 81st class	0	0	0
82. 82nd class	0	0	0
83. 83rd class	0	0	0
84. 84th class	0	0	0
85. 85th class	0	0	0
86. 86th class	0	0	0
87. 87th class	0	0	0
88. 88th class	0	0	0
89. 89th class	0	0	0
90. 90th class	0	0	0
91. 91st class	0	0	0
92. 92nd class	0	0	0
93. 93rd class	0	0	0
94. 94th class	0	0	0
95. 95th class	0	0	0
96. 96th class	0	0	0
97. 97th class	0	0	0
98. 98th class	0	0	0
99. 99th class	0	0	0
100. 100th class	0	0	0

Table 2 MARYLAND Summary of Ribes Eradication by Working, from 1932 to 1938 Inclusive

Classification	Year	Acres Worked	No. of Ribes Destroyed			Total Man-Days Labor	Total Cost	Per Acre		
			Wild	Culti. Escaped	Total			No. of Ribes	Man-Days	Cost
Working First	1932	800	0	1	1	-	26.35	.001	-	0.033
	1933	1,890	187,465	5	187,470	316	1,684.95	99.04	0.17	0.89
	1934	106,695	927,189	1,062	928,251	2,442	8,219.05	8.71	0.023	0.077
	1935	24,259	511,835	496	512,331	2,112	5,622.07	21.04	0.087	0.232
	1936	22,281	511,614	881	512,495	2,681	7,653.65	23.0	0.12	0.344
	1937	12,165	287,283	492	287,775	1,785	5,610.87	23.6	0.15	0.46
	1938	3,389	301,774	137	301,925	1,636	4,031.09	88.9	0.48	1.19
Total		171,479	2,727,160	3,074	2,730,234	10,972	32,848.03	15.8	0.064	0.19
Second	1934	469	37,886	0	37,886	56	204.73	80.7	0.119	0.436
	1935	18,603	185,718	1,408	187,126	1,588	4,484.18	10.0	0.035	0.241
	1936	1,899	21,894	92	21,986	434	1,000.00	11.6	0.228	0.52
	1937	4,158	60,005	181	60,186	809	2,460.00	14.4	0.194	9.59
	1938	817	91,588	10	91,598	504	1,416.70	112.0	0.63	1.73
Total		25,946	397,091	1,691	398,782	3,391	9,565.61	15.3	0.13	0.37
Third	1936	5,988	10,478	323	10,801	398	1,300.00	1.8	0.08	0.22
	1937	3,234	41,281	82	41,363	447	1,374.00	12.8	0.138	0.42
	1938	340	8,665	0	8,665	124	348.40	25.0	0.36	1.02
Total		9,562	60,424	405	60,829	1,069	3,022.40	6.3	0.11	0.31
Fourth	1938	2,420	3,904	7	3,911	217	271.00	1.6	0.089	0.11
	Total	2,420	3,904	7	3,911	217	271.00	1.6	0.089	0.11
All Workings Grand Total		209,407	3,188,579	5,177	3,193,756	15,649	45,707.44	15.2	0.074	0.21

[illegible]

TABLE 2 (Continued) Summary of Ribes Eradication in Maryland by Project and Year from 1932 to 1938 Inclusive

Classification by P R O J E C T	Year	Acres Worked	No. of Ribes Destroyed			Total Man- Days Labor	Total Cost	Per Acre			Acres Per Man- days
			Wild	Culti. & Escaped	Total			No. Ribes	No. Man Days	Cost	
Project											
Regular	1932	800	0	1	1	-	\$ 26.35	.001	-	.033	-
	1937	-	0	-	-	-	158.50	-	-	-	-
	1938	980	68	48	116	2	2.25(1)	0.12	0.002	0.023	4.90.
Total		1,780	68	49	117	2	187.10	0.066	0.001	0.10	890.
E. R. A.	1936	185	74,000	0	74,000	149	323.14	400.	0.80	1.75	1.24
or F. S. A.	1937	465	84,161	0	84,161	223	733.20	181.	0.48	1.58	2.08
Total		650	158,161	0	158,161	372	1,056.34	245.3	0.57	1.62	1.75
Regular & E.R.A. or F. S. A combined		2,430	158,229	49	158,278	374	1,243.44	65.0	0.154	0.51	6.50
WPA	1935	18,487	308,689	430	309,119	1,770	5,196.36	16.7	0.096	0.28	10.44
	1936	29,801	439,221	1,296	440,517	3,346	9,512.51	14.7	0.112	0.32	8.91
	1937	19,092	304,408	755	305,163	2,818	3,553.17	16.0	0.147	0.45	6.77
	1938	3,094	360,337	106	360,443	1,901	5,339.94	123.0	0.614	1.72	1.62
Total		70,474	1,432,655	2,587	1,435,242	9,835	28,601.98	23.4	0.139	.41	7.17
CCC and E. C.W.	1934	260	76,051	0	76,051	292	292.00	292	1.12	1.12	0.88
	1935	5,733	274,503	12	274,515	863	863.00	47.9	0.15	0.15	6.63
	1936	182	30,765	0	30,765	118	118.00	169	0.65	0.65	1.54
	1938	2,892	25,526	0	25,526	578	725.00	8.9	0.20	0.25	5.00
Totals		9,067	406,845	12	406,857	1,851	1,998.00	44.8	0.20	0.22	5.0
P. W. A.	1933	1,890	187,465	5	187,470	316	1,684.95	99.04	0.17	0.89	5.98
or	1934	106,904	889,024	1,062	890,086	2,206	8,131.78	8.3	0.02	0.076	48.46
N. I. RA	1935	18,642	114,361	1,462	115,823	1,067	4,046.89	6.2	0.057	0.22	17.45
Total		127,436	1,190,850	2,529	1,193,379	3,589	13,863.62	9.3	0.03	0.10	35.5
Grand Total		209,407	3,188,579	5,177	3,193,756	15,649	45,707.04	15.2	0.074	0.21	13.4
All Projects											
Y E A R	1932	800	0	1	1	-	26.35	0.001	-	0.033	-
	1933	1,890	187,465	5	187,470	316	1,684.95	99.04	0.17	0.89	5.98
	1934	107,164	965,075	1,062	966,137	2,498	8,423.78	9.01	0.02	0.079	42.9
	1935	42,862	697,553	1,904	699,457	3,700	10,106.25	16.31	0.09	0.235	11.5
	1936	30,168	543,986	1,296	545,282	3,613	9,953.65	18.07	0.11	0.33	8.3
	1937	19,557	388,569	755	389,324	3,041	9,444.87	19.9	0.155	0.48	6.4
	1938	6,966	405,931	154	406,085	2,481	6,067.19	58.3	0.356	0.87	2.79
Totals		209,407	3,188,579	5,177	3,193,756	15,649	\$45,707.04	15.2	0.074	0.21	13.4

(1) Note work on 880 acres was done by Agent, hence is not charged here, but to supervision

Classification				Year			
Commodity				1950			
Description				Production			
Value				Quantity			
Total				Total			
1950				1951			
1952				1953			
1954				1955			
1956				1957			
1958				1959			
1960				1961			
1962				1963			
1964				1965			
1966				1967			
1968				1969			
1970				1971			
1972				1973			
1974				1975			
1976				1977			
1978				1979			
1980				1981			
1982				1983			
1984				1985			
1986				1987			
1988				1989			
1990				1991			
1992				1993			
1994				1995			
1996				1997			
1998				1999			
2000				2001			
2002				2003			
2004				2005			
2006				2007			
2008				2009			
2010				2011			
2012				2013			
2014				2015			
2016				2017			
2018				2019			
2020				2021			
2022				2023			
2024				2025			
2026				2027			
2028				2029			
2030				2031			
2032				2033			
2034				2035			
2036				2037			
2038				2039			
2040				2041			
2042				2043			
2044				2045			
2046				2047			
2048				2049			
2050				2051			
2052				2053			
2054				2055			
2056				2057			
2058				2059			
2060				2061			
2062				2063			
2064				2065			
2066				2067			
2068				2069			
2070				2071			
2072				2073			
2074				2075			
2076				2077			
2078				2079			
2080				2081			
2082				2083			
2084				2085			
2086				2087			
2088				2089			
2090				2091			
2092				2093			
2094				2095			
2096				2097			
2098				2099			
2100				2101			
2102				2103			
2104				2105			
2106				2107			
2108				2109			
2110				2111			
2112				2113			
2114				2115			
2116				2117			
2118				2119			
2120				2121			
2122				2123			
2124				2125			
2126				2127			
2128				2129			
2130				2131			
2132				2133			
2134				2135			
2136				2137			
2138				2139			
2140				2141			
2142				2143			
2144				2145			
2146				2147			
2148				2149			
2150				2151			
2152				2153			
2154				2155			
2156				2157			
2158				2159			
2160				2161			
2162				2163			
2164				2165			
2166				2167			
2168				2169			
2170				2171			
2172				2173			
2174				2175			
2176				2177			
2178				2179			
2180				2181			
2182				2183			
2184				2185			
2186				2187			
2188				2189			
2190				2191			
2192				2193			
2194				2195			
2196				2197			
2198				2199			
2200				2201			
2202				2203			
2204				2205			
2206				2207			

TABLE # 2 MARYLAND Summary of Ribes Eradication, by Ownership and Years from 1932 to 1938 Inclusive

Classification by Ownership	Year	Acres	Number of Ribes Destroyed			Total Man- days labor	Total Cost	Per Acre		
			Wild	Culti. and Escaped	Total			No. Ribes	No. Man days	Cost
Federal										
E. R. A. or	1936	185	74,000	-	74,000	149	\$ 323.14	400	0.79	1.75
F. S. A.	1937	740	123,586	-	123,586	407	1,348.30	164.3	0.55	1.82
	1938	230	16,925	-	16,925	89	250.55	73.0	0.38	1.08
Total		1,155	214,511	-	214,511	645	1,921.99	185.	0.55	1.66
State	1932	305	-	-	-	-	-	-	-	-
	1933	430	51,556	-	51,556	138	615.96	119.9	0.32	1.41
	1934	17,980	293,785	-	293,785	667	2,433.52	16.3	0.03	0.13
	1935	4,000	151,202	-	151,202	973	2,654.00	37.8	0.24	0.66
	1936	1,444	14,348	20	14,368	400	950.00	9.9	0.27	0.83
	1937	2,104	146,273	14	146,287	1,133	3,636.72	69.5	0.63	1.72
	1938	4,474	96,295	49	96,344	1,299	2,745.29	21.	0.29	0.61
Total		30,737	735,459	83	753,542	4,610	13,035.49	24	0.15	0.43
County and Municipal (All Municipal in Maryland)	1932	440	0	0	0	0	0	0	0	0
	1935	440	0	1	1	1	13.95	0.022	0.022	0.03
	1936	320	0	18	18	7	22.00	0.05	.02	.06
	1937	10,000	0	478	478	0	0	-	-	-
	1938	440	0	41	41	-	-	-	-	-
Total		11,640	0	538	538	8	35.95	0.04	0	.003
Private	1932	55	-	1	1	-	26.35	.001	-	0.033
	1933	1,460	135,909	5	135,914	178	1,068.99	93.0	0.12	0.73
	1934	89,184	671,290	1,062	672,352	1,831	5,990.26	7.5	0.02	0.06
	1935	38,422	546,351	1,903	548,254	2,726	7,438.30	14.3	0.07	0.19
	1936	28,219	455,638	1,258	456,896	3,057	8,658.51	16.1	0.10	0.30
	1937	6,713	118,710	263	118,973	1,501	4,459.85	19.9	0.22	0.66
	1938	1,822	292,711	64	292,775	1,093	3,071.35	160.0	0.59	1.67
Total		165,875	2,220,609	4,556	2225,165	10,386	\$30,713.61	13.0	0.06	0.18
GRAND TOTAL		209,407	3,188,579	5,177	3193,756	15,649	\$45,707.04	15.2	0.075	0.218

Department	Total	Payroll		Travel		Postage		Telephone		Miscellaneous	
		Actual	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated
Department of Agriculture	1,234,567	1,234,567	1,234,567	123,456	123,456	45,678	45,678	23,456	23,456	12,345	12,345
Department of Education	987,654	987,654	987,654	98,765	98,765	34,567	34,567	18,901	18,901	9,876	9,876
Department of Health	765,432	765,432	765,432	76,543	76,543	28,901	28,901	14,567	14,567	7,654	7,654
Department of Social Services	654,321	654,321	654,321	65,432	65,432	23,456	23,456	12,345	12,345	6,543	6,543
Department of Public Works	543,210	543,210	543,210	54,321	54,321	19,876	19,876	10,987	10,987	5,432	5,432
Department of Finance	432,109	432,109	432,109	43,210	43,210	16,789	16,789	8,765	8,765	4,321	4,321
Department of Law	321,098	321,098	321,098	32,109	32,109	12,345	12,345	6,543	6,543	3,210	3,210
Department of Housing	210,987	210,987	210,987	21,098	21,098	8,765	8,765	4,321	4,321	2,109	2,109
Department of Transportation	109,876	109,876	109,876	10,987	10,987	4,321	4,321	2,109	2,109	1,098	1,098
Department of Parks and Recreation	98,765	98,765	98,765	9,876	9,876	3,456	3,456	1,789	1,789	987	987
Department of Conservation	87,654	87,654	87,654	8,765	8,765	3,210	3,210	1,654	1,654	876	876
Department of Planning	76,543	76,543	76,543	7,654	7,654	2,987	2,987	1,543	1,543	765	765
Department of Information	65,432	65,432	65,432	6,543	6,543	2,654	2,654	1,432	1,432	654	654
Department of Research	54,321	54,321	54,321	5,432	5,432	2,345	2,345	1,321	1,321	543	543
Department of Administration	43,210	43,210	43,210	4,321	4,321	2,109	2,109	1,210	1,210	432	432
Department of General Services	32,109	32,109	32,109	3,210	3,210	1,987	1,987	1,109	1,109	321	321
Department of Public Safety	21,098	21,098	21,098	2,109	2,109	1,765	1,765	987	987	210	210
Department of Corrections	10,987	10,987	10,987	1,098	1,098	876	876	543	543	109	109
Department of Veterans Affairs	9,876	9,876	9,876	987	987	765	765	432	432	98	98
Department of Indian Affairs	8,765	8,765	8,765	876	876	654	654	321	321	87	87
Department of National Defense	7,654	7,654	7,654	765	765	543	543	210	210	76	76
Department of Atomic Energy	6,543	6,543	6,543	654	654	432	432	109	109	65	65
Department of Space	5,432	5,432	5,432	543	543	321	321	98	98	54	54
Department of Outer Space	4,321	4,321	4,321	432	432	210	210	87	87	43	43
Department of Astronautics	3,210	3,210	3,210	321	321	109	109	76	76	32	32
Department of Space Exploration	2,109	2,109	2,109	210	210	98	98	65	65	21	21
Department of Space Research	1,098	1,098	1,098	109	109	87	87	54	54	10	10
Department of Space Development	987	987	987	98	98	76	76	43	43	9	9
Department of Space Utilization	876	876	876	87	87	65	65	32	32	8	8
Department of Space Exploration	765	765	765	76	76	54	54	21	21	7	7
Department of Space Research	654	654	654	65	65	43	43	10	10	6	6
Department of Space Development	543	543	543	54	54	32	32	9	9	5	5
Department of Space Utilization	432	432	432	43	43	21	21	8	8	4	4
Department of Space Exploration	321	321	321	32	32	10	10	7	7	3	3
Department of Space Research	210	210	210	21	21	9	9	6	6	2	2
Department of Space Development	109	109	109	10	10	8	8	5	5	1	1
Department of Space Utilization	98	98	98	9	9	7	7	4	4	0	0
Department of Space Exploration	87	87	87	8	8	6	6	3	3	0	0
Department of Space Research	76	76	76	7	7	5	5	2	2	0	0
Department of Space Development	65	65	65	6	6	4	4	1	1	0	0
Department of Space Utilization	54	54	54	5	5	3	3	0	0	0	0
Department of Space Exploration	43	43	43	4	4	2	2	0	0	0	0
Department of Space Research	32	32	32	3	3	1	1	0	0	0	0
Department of Space Development	21	21	21	2	2	0	0	0	0	0	0
Department of Space Utilization	10	10	10	1	1	0	0	0	0	0	0
Department of Space Exploration	9	9	9	0	0	0	0	0	0	0	0
Department of Space Research	8	8	8	0	0	0	0	0	0	0	0
Department of Space Development	7	7	7	0	0	0	0	0	0	0	0
Department of Space Utilization	6	6	6	0	0	0	0	0	0	0	0
Department of Space Exploration	5	5	5	0	0	0	0	0	0	0	0
Department of Space Research	4	4	4	0	0	0	0	0	0	0	0
Department of Space Development	3	3	3	0	0	0	0	0	0	0	0
Department of Space Utilization	2	2	2	0	0	0	0	0	0	0	0
Department of Space Exploration	1	1	1	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0	0	0	0	0	0	0	0
Department of Space Research	0	0	0	0	0	0	0	0	0	0	0
Department of Space Development	0	0	0	0	0	0	0	0	0	0	0
Department of Space Utilization	0	0	0	0	0	0	0	0	0	0	0
Department of Space Exploration	0	0	0	0							



White pine stand at Biltmore Forest, Biltmore,
North Carolina. White pines have been planted
by the hundreds of thousands in Western North
Carolina. No. 7595.

TABLE I NORTH CAROLINA Summary of Ribes eradication in 1938 By Working, Project and Ownership

	Acreage Worked	No. of Ribes Destroyed			Number 8 hour man- days	Total Cost	No. Acres Per Man- Days	Per Acre		
		Wild	Culti. & Escaped	Total				No. Ribes	Number man-days	Cost
<u>By Working</u>										
First	213,418	116,199	22,642	138,841	2,259	\$4,716.78	94.3	0.65	0.01	\$0.022
Second	42,934	27,059	3,803	30,862	1,205	2,328.98	35.6	0.71	.003	0.052
Third	67	-	2,746	2,746	149	311.46	.45	40.9	2.22	4.65
Total	256,419	143,258	29,191	172,449	3,613	7,357.22	71.0	0.674	0.0141	0.0288
<u>By Project</u>										
Regular	48,217	9,512	2,292	11,804	168	256.85	287.0	0.25	0.0037	0.0053
WPA	208,202	133,746	26,399	160,645	3,445	7,100.37	60.4	0.77	0.0165	0.034
CCC	None									
Total	256,419	143,258	29,191	172,449	3,613	7,357.22	71.0	0.674	0.0141	0.0288
<u>By Ownership</u>										
Federal, Nat'l For. Indian Res. 54,809*		114,262	738	115,000	1,808	3,812.87	30.3	2.1	0.033	0.0695
State & Mun.	95	-	226	226	5	8.48	19.0	2.38	0.0526	0.0892
Private	201,515	28,996	28,227	57,223	1,800	3,535.87	111.6	0.28	0.0089	0.0175
Total	256,419	143,258	29,191	172,449	3,613	\$7,357.22	71.0	0.674	0.0141	0.0288

*Includes 100 acres of Indian Lands, work on which cost 74¢ - no Ribes being found

TABLE 2

Summary of Ribes Eradication in North Carolina

By Working, and Year from 1933 to 1938 Inclusive

Classification	Year	Acres Worked	No. of Ribes Destroyed			Total Man-days labor	Total Cost	Acres per man- days	Per Acre		
			Wild	Culti.	Total				Number Ribes	Man- Days	Cost
Working First	1933	29,570	360		360	415	\$ 1,828.48	71.2	0.012	0.014	.062
	1934	582,610	14,823	85,499	100,322	2,818	15,323.44	206.0	0.172	0.005	.026
	1935	572,960	147,954	108,989	256,943	7,884	22,337.27	72.6	0.45	0.014	0.039
	1936	760,467	321,160	313,232	634,392	12,046	26,367.70	63.1	0.83	0.016	0.035
	1937	325,455	180,529	53,828	234,357	4,590	7,650.55	70.9	0.72	0.014	0.024
	1938	213,418	116,199	22,642	138,841	2,259	4,716.78	94.4	0.65	0.01	0.22
	Total	2,484,480	781,025	583,990	1,365,015	30,012	78,224.22	82.8	0.55	0.012	0.031
Second	1935	15,400	-	4,119	4,119	147	830.56	104.8	0.26	0.009	0.054
	1936	216,206	30,311	37,417	67,728	2,490	11,301.01	36.8	0.31	0.012	0.052
	1937	355,499	3,547	27,370	30,917	3,052	6,007.61	116.4	0.08	0.008	0.017
	1938	42,934	27,059	3,803	30,862	1,205	2,328.98	35.6	0.71	0.028	0.052
Total		630,039	60,917	72,709	133,626	6,894	20,468.16	91.4	0.21	0.0109	0.032
Third		67	-	2,746	2,746	149	311.46	0.46	40.9	2.22	4.65
		67		2,746	2,746	149	311.46	0.46	40.9	2.22	4.65
GRAND TOTAL		3,114,586	841,942	659,445	1,501,387	37,055	\$99,003.84	84.0	0.48	.012	0.0318

[illegible]

TABLE 2 (Continued) Summary of Ribes Eradication in North Carolina By Project and Ownership
From 1933 to 1938 Inclusive

Classification	Year	Acres Worked	Number of Ribes Destroyed			Total Man-days labor	Total Cost	Acres Per Man-days	Per Acre		
			Wild	Culti.	Total				No Ribes	M-days	Cost
P R O J E C T											
Regular	1936	5,195	690	2,269	2,959	105	\$ 322.00	4.9	0.57	0.202	.062
	1938	48,217	9,512	2,292	11,804	168	256.85	287.0	0.25	0.0037	.0053
Total		53,412	10,202	4,561	14,763	273	578.85	192.0	0.27	0.0051	.0011
WPA	1935	241,189	138,936	71,303	210,239	6,743	14,779.59	35.7	0.87	0.028	.061
	1936	971,478	350,781	348,380	699,161	14,431	37,346.71	67.2	0.72	0.014	.026
	1937	569,405	182,909	73,661	256,570	6,479	12,347.25	87.9	0.45	0.011	0.022
	1938	208,202	133,746	26,899	160,645	3,445	7,100.37	60.3	0.77	0.0165	0.034
Total		1,990,274	806,372	520,243	1,326,615	31,098	71,573.92	64.0	0.66	0.016	0.036
PWA	1934	558,012	14,823	85,230	100,053	2,663	14,537.24	209.0	0.18	0.004	0.026
	1935	347,171	9,018	41,805	50,823	1,288	8,388.24	269.0	0.14	0.004	0.025
Total		905,183	23,841	127,035	150,876	3,951	22,925.48	229.0	0.17	0.004	0.025
CCC	1933	29,570	360	-	360	415	1,828.48	71.2	0.01	0.012	0.025
	1934	24,598	-	269	269	155	786.20	161.0	0.01	0.006	0.032
	1937	111,549	1,167	7,337	8,504	1,163	1,310.91	95.8	0.077	0.010	0.012
Total		165,717	1,527	7,606	9,133	1,733	3,925.59	95.6	0.05	0.015	0.023
Total Emergency Program											
		3,061,174	831,740	654,834	1,486,624	36,782	98,424.99	82.5	0.48	.012	0.032
Total all Programs											
		3,114,586	841,942	659,445	1,501,387	37,055	99,003.84	84.0	0.48	0.012	0.0318
O W N E R S H I P											
Federal Government											
Nat'l Forest	1933	27,560	227	-	227	403	1,627.65	68.3	0.008	0.015	0.059
	1934	24,598	269	-	269	155	786.20	158.7	0.01	0.006	0.032
	1936	29,332	242	2,651	2,893	160	474.08	183.3	0.099	0.005	0.016
	1937	141,596	107,365	9,253	116,618	2,605	3,543.81	54.3	0.82	0.018	0.025
	1938	54,709	114,262	738	115,000	1,807	3,812.13	30.3	2.1	0.033	0.0695
Total		277,795	222,365	12,642	235,007	5,130	\$10,243.87	54.1	0.847	0.018	0.037
National Park	1933	2,010	133	-	133	12	200.83	167.5	.066	.006	.10
	1937	14,285	3,909	-	3,909	263	792.88	54.3	0.27	.018	.055
	1938	None	-	-	-	-	-	-	-	-	-
Total		16,295	4,042	-	4,042	275	993.71	59.2	0.25	0.017	0.061
Indian Reservation											
	1938	100	-	-	-	1	.74	100.	0	.01	0.0074
Total Federal Lands											
		294,190	226,407	12,642	239,049	5,406	\$11,238.32	54.4	0.81	0.018	0.033
Municipal	1937	160	-	-	-	1	7.47	160.0	0	0.006	.047
	1938	95	-	226	226	5	8.48	19.0	2.38	0.053	0.089
Total		255	-	226	226	6	15.95	42.5	.89	0.023	0.062
Private	1934	558,012	14,554	85,499	100,053	2,663	\$14,537.24	209.5	0.18	0.0048	.026
	1935	588,360	147,954	113,108	261,062	8,031	23,167.83	73.2	0.44	0.014	0.039
	1936	947,341	351,229	347,998	699,227	14,376	37,194.63	65.9	0.74	0.015	0.039
	1937	524,913	72,802	71,745	144,547	4,773	9,314.00	109.8	0.28	0.009	0.018
	1938	201,515	28,996	28,227	57,223	1,800	3,535.87	111.6	0.28	0.0089	0.0175
Total		2,820,141	615,535	646,577	1,262,112	31,643	87,749.57	89.1	0.45	0.012	0.031
GRAND TOTAL ALL LANDS											
		3,114,586	841,942	659,445	1,501,387	37,055	\$99,003.84	84.0	0.48	0.012	0.0318

TABLE 2 (Continued)
Summary of River Discharge in the United States
from 1957 to 1962

River	Location	Number of River Discharge		Total
		1957	1962	
Colorado	Colorado	1,000	1,000	2,000
	Total	1,000	1,000	2,000
California	California	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Texas	Texas	1,000	1,000	2,000
	Total	1,000	1,000	2,000
New Mexico	New Mexico	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Arizona	Arizona	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Nevada	Nevada	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Utah	Utah	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Idaho	Idaho	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Montana	Montana	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Wyoming	Wyoming	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Nebraska	Nebraska	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Kansas	Kansas	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Oklahoma	Oklahoma	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Missouri	Missouri	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Illinois	Illinois	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Indiana	Indiana	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Ohio	Ohio	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Pennsylvania	Pennsylvania	1,000	1,000	2,000
	Total	1,000	1,000	2,000
New York	New York	1,000	1,000	2,000
	Total	1,000	1,000	2,000
New Jersey	New Jersey	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Delaware	Delaware	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Maryland	Maryland	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Virginia	Virginia	1,000	1,000	2,000
	Total	1,000	1,000	2,000
North Carolina	North Carolina	1,000	1,000	2,000
	Total	1,000	1,000	2,000
South Carolina	South Carolina	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Georgia	Georgia	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Florida	Florida	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Alabama	Alabama	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Mississippi	Mississippi	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Louisiana	Louisiana	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Arkansas	Arkansas	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Tennessee	Tennessee	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Kentucky	Kentucky	1,000	1,000	2,000
	Total	1,000	1,000	2,000
West Virginia	West Virginia	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Maryland	Maryland	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Delaware	Delaware	1,000	1,000	2,000
	Total	1,000	1,000	2,000
New Jersey	New Jersey	1,000	1,000	2,000
	Total	1,000	1,000	2,000
New York	New York	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Pennsylvania	Pennsylvania	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Ohio	Ohio	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Indiana	Indiana	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Illinois	Illinois	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Michigan	Michigan	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Wisconsin	Wisconsin	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Minnesota	Minnesota	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Iowa	Iowa	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Missouri	Missouri	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Kansas	Kansas	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Nebraska	Nebraska	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Oklahoma	Oklahoma	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Texas	Texas	1,000	1,000	2,000
	Total	1,000	1,000	2,000
New Mexico	New Mexico	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Arizona	Arizona	1,000	1,000	2,000
	Total	1,000	1,000	2,000
California	California	1,000	1,000	2,000
	Total	1,000	1,000	2,000
Colorado	Colorado	1,000	1,000	2,000
	Total	1,000	1,000	2,000

TABLE 2 (continued) Summary of Ribes Eradication in North Carolina by Years 1933 to 1938 Inclusive

Classification	Year	Acres Worked	No. of Ribes Destroyed			Total Man-Days labor	Total Cost	No. Acres Per man days	Per Acre		
			Wild	Culti.	Total				No. Ribes	No. Man days	Cost
Y E A R											
	1933	29,570	360	-	360	415	\$ 1,828.48	71.3	0.01	0.01	\$0.061
	1934	582,610	14,823	85,499	100,322	2,818	15,323.44	206.6	0.17	0.0048	0.026
	1935	588,360	147,954	113,108	261,062	8,031	23,167.83	73.2	0.44	0.0136	0.039
	1936	976,673	351,471	350,649	702,120	14,536	37,668.71	67.2	0.709	0.015	0.038
	1937	680,954	184,076	80,998	265,074	7,642	13,658.16	91.5	0.389	0.011	0.20
	1938	256,419	143,258	29,191	172,449	3,613	7,357.22	71.0	0.674	0.0141	0.0288
Total		3,114,586	841,942	659,445	1,501,387	37,055	\$99,003.84	84.0	0.48	0.012	\$0.0318

TABLE I. Tennessee Summary of Bikes Application in 1955 By Working, Project and Ownership

	Acres Worked	No. of Bikes Destroyed			No. of Hours man-days	Total Cost	Number Acres Per 5-days	Per Acre		
		Wild	Unli.	Total				Tender Bikes	Number man-days	Cost
<u>By Working</u>										
First	130,229	1,589,110	62,668	1,651,778	10,773	24,267.60	12.6	12.6	0.083	0.186
Second	134	4,182	-	4,182	27	12.39	2.3	31.2	.123	0.964
Third	-	-	-	-	-	-	-	-	-	-
Total	130,423	1,589,622	62,668	1,652,290	10,800	24,396.99	12.04	12.67	0.083	0.187
<u>By Project</u>										
Regular	none									
NRA	130,423	1,589,622	62,668	1,652,290	10,800	24,396.99	12.04	12.67	0.083	0.187
CCC	NONE									
Total	130,423	1,589,622	62,668	1,652,290	10,800	24,396.99	12.04	12.67	0.083	0.187
<u>By Ownership</u>										
Federal	54,388	584,485	1,525	586,010	3,878	8,138.99	14.02	10.78	.071	.149
State	-	-	-	-	-	-	-	-	-	-
Private	76,035	1,005,137	61,143	1,066,280	6,952	12,258.00	10.93	14.02	.091	.214
Total	130,423	1,589,622	62,668	1,652,290	10,830	24,396.99	12.04	12.67	0.083	0.187

TABLE 14
Summary of Receipts and Disbursements

Receipts	Disbursements		Balance
	General	Special	
From Sales	1,000,000	500,000	500,000
From Donations	200,000	100,000	100,000
From Interest	100,000	50,000	50,000
From Other	50,000	25,000	25,000
Total	1,350,000	675,000	675,000
For General	1,000,000	500,000	500,000
For Special	200,000	100,000	100,000
For Interest	100,000	50,000	50,000
For Other	50,000	25,000	25,000
Total	1,350,000	675,000	675,000

TABLE 2 (continued) Summary of Ribes eradication in Washington by Projects and by Years - 1933 to 1938 inclusive

Project	Year	Acres	No. of Ribes Destroyed			Total man-days labor	Total Cost	Acres per man-days	Per Acre		
			Wild	Cult.	Total				No. of Ribes	No. of man-days	Cost
W. F. A.	1933	15,439	192,815	2,077	194,892	1,108	\$ 2,991.27	13.9	12.6	0.072	0.114
	1934	102,263	1,265,572	27,444	1,293,016	4,739	3,175.32	21.6	12.6	0.046	0.03
	1935	122,331	1,269,252	62,291	1,331,543	8,810	15,274.04	13.7	10.34	0.071	0.124
	1936	130,423	1,589,622	62,666	1,652,288	10,830	24,396.99	12.0	12.67	0.083	0.107
Total		370,456	4,317,261	154,438	4,471,700	25,487	40,843.62	14.16	12.00	0.0677	0.134
CCC and EON	1933	10,720	62,832	40	62,872	382	1,046.83	28.0	5.86	0.035	0.095
	1934	12,030	11,610	0	11,610	297	720.59	10.5	1.13	0.021	0.059
	1935	106	11,527	104	11,631	36	75.25	11.3	20.84	0.003	0.225
	1936	150	22,122	0	22,122	19	18.70	9.47	122.9	0.105	0.104
Total		23,006	111,091	144	111,235	734	1,860.37	31.3	4.76	0.0518	0.079
F. W. A.	1934	89,538	49,441	1,235	50,676	933	8,241.73	96.0	0.56	0.0104	0.069
	1935	32,502	117,264	899	117,923	506	2,339.23	64.8	3.59	0.019	0.073
Total		122,040	166,705	1,914	168,619	1,439	10,580.96	85.0	1.37	0.018	0.070
All Projects GRAND TOTAL		516,652	4,594,077	156,538	4,751,615	27,660	\$60,342.47	18.7	9.18	0.053	0.117
Y E A R											
		Acresage Worked									
		Total	Initially								
1933		10,720	10,720	62,832	40	62,872	382	1,046.83	28.0	5.86	0.035
1934		101,588	101,588	61,041	1,235	62,276	1,230	6,971.82	52.5	0.64	0.012
1935		48,647	47,768	321,636	2,040	323,676	1,650	4,473.77	29.5	6.67	0.034
1936		102,113	100,515	1,237,694	27,444	1,265,138	4,758	8,177.82	21.5	12.54	0.046
1937		122,331	122,010	1,269,252	62,291	1,331,543	8,810	15,274.04	15.9	10.34	0.071
1938		130,423	130,209	1,589,622	62,666	1,652,288	10,830	24,396.99	12.04	12.67	0.083
Total		516,652	512,920	4,594,077	156,538	4,751,615	27,660	60,342.47	18.7	9.18	0.053

TABLE 2 (continued) Summary of Ribes Eradication in Tennessee, by Working, Years and Ownership
from 1933 to 1938 Inclusive

Working	Year	Acres	Number Ribes Destroyed			Total Man-days labor	Total Cost	Number Acres per M-days	Per Acre		
			Wild	Culti.	Total				No. Ribes	No. M-days	Cost
First											
	1933	10,720	62,832	40	62,872	382.0	\$ 1,048.83	28.1	5.86	0.035	0.098
	1934	101,588	64,041	1,255	65,296	1,230.0	6,971.82	82.8	0.64	0.012	0.068
	1935	47,768	264,408	2,840	267,248	1,575.8	4,160.64	30.4	5.59	0.035	0.087
	1936	100,515	1,232,578	27,444	1,260,022	4,557.8	7,915.90	22.0	11.5	0.045	0.078
	1937	122,040	1,236,656	62,291	1,298,947	8,328.1	14,404.00	14.7	10.64	0.068	0.118
	1938	130,289	1,585,440	62,668	1,648,108	10,773.0	24,267.60	12.0	12.6	0.083	0.186
Total		512,920	4,445,955	156,538	4,602,493	26,847.0	58,768.79	19.2	8.98	.052	.114
Second											
	1935	879	57,228		57,228	73.7	313.13	11.9	77.5	.064	.356
	1936	1,928	55,116		55,116	200.1	261.12	9.6	28.6	.104	.134
	1937	791	32,596		32,596	481.8	870.04	1.6	41.22	.609	1.09
	1938	134	4,182		4,182	57.0	129.39	2.3	31.2	.425	.964
Total		3,732	149,122		149,122	813	1,573.68	4.6	40.0	.218	.423
GRAND TOTAL		516,652	4,595,077	156,538	4,751,615	27,660	60,342.47	18.7	9.18	.053	.117
OWNERSHIP											
National Forests											
	1933	8,895	62,830	26	62,856	184.00	848.68	48.3	7.06	0.020	.095
	1934	11,970	185	-	185	216.00	633.44	5.4	0.015	.018	.053
	1936	860	258,796	3,134	261,930	89.15	120.22	9.75	304.57	.103	.139
	1937	47,045	182,712	75	182,787	1,500.75	3,173.76	31.3	3.88	.032	.067
	1938	54,387	584,485	1,525	586,010	3,878.00	8,138.99	14.02	10.78	.071	.149
Total All years		123,158	1,089,008	4,760	1,093,768	5,868.	\$12,915.09	20.95	8.87	.0476	.105
National Parks											
	1933	1,825	2	14	16	198.0	200.15	.92	0.009	0.108	0.109
	1938	None									
Total		124,983	1,089,010	4,774	1,093,784	6,066	\$13,115.24	20.6	8.75	0.040	0.105
Federal											
Private Lands											
	1934	89,618	63,856	1,255	65,111	1,014.0	6,338.38	8.9	.726	0.011	0.070
	1935	48,647	321,636	2,840	324,476	1,650.	4,473.77	29.4	6.67	0.034	0.092
	1936	101,583	1,028,898	24,310	1,053,208	4,669.	8,056.80	21.8	10.36	0.046	0.079
	1937	75,786	1,086,540	62,216	1,148,756	7,309	12,100.28	10.4	15.15	0.096	0.159
	1938	76,035	1,005,137	61,143	1,066,280	8,952	16,258.00	10.03	14.02	0.091	0.214
All Years		391,669	3,506,067	151,764	3,657,831	21,594	47,227.23	18.1	9.33	0.055	0.115
All Lands											
GRAND TOTAL		516,652	4,595,077	156,538	4,751,615	27,660	\$60,342.47	18.7	9.18	0.053	0.117

TABLE 1

VIRGINIA

Summary of Ribes Eradication in 1938

By Working, Project and Ownership

By Working	Acreage Worked	No. Ribes Destroyed			Number 8 hour man- days	Total Cost	Per Acre		
		Wild	Culti.	Total			No. Ribes	No. Man-Days	Cost
<u>By Working</u>									
First	71,868	665,234	3,952	669,186	8,139	12,615.22	9.3	0.113	\$0.17
Second	3,678	82,553	12	82,565	1,725	2,710.75	22.4	0.469	0.73
Third	2,700	30,421	0	30,421	825	1,305.85	11.2	0.305	0.48
Total	78,246	778,208	3,964	782,172	10,689	16,631.82	9.9	.137	\$0.21
<u>By Project</u>									
Regular	22	614	0	614	31	300.60	27.7	1.415	13.70
W. P. A.	77,504	751,787	3,964	755,751	10,382	15,831.22	.975	0.134	.004
C. C. C.	720	25,807	0	25,807	276	510.00	35.8	0.384	.709
Total	78,246	778,208	3,964	782,172	10,689	16,631.82	9.9	.137	0.21
<u>By Ownership</u>									
Federal	36,140	511,148	1,665	512,813	7,483	11,907.15	14.2	.204	.327
State, County and Municipal	3,648	0	0	0	2	5.12	-	.0005	.0014
Private	38,458	267,060	2,299	269,359	3,204	4,719.55	7.01	.0.834	0.12
Total	78,246	778,208	3,964	782,172	10,689	16,631.82	9.9	.137	0.21

Summary of Rice Production in 1936

By Month	Acreage Harvested	Yield Per Acre	Total		Total Production
			Wet Season	Dry Season	
January	1,800	1.80	3,240	0	3,240
February	2,575	2.58	6,645	0	6,645
March	2,700	2.70	7,290	0	7,290
Total	7,075	2.04	16,775	0	16,775
April	88	0.88	77	0	77
May	11,504	1.15	13,230	0	13,230
June	750	0.75	563	0	563
Total	13,132	1.31	13,860	0	13,860
July	36,315	3.63	132,434	0	132,434
August	2,048	2.05	4,200	0	4,200
September	1,125	1.13	1,271	0	1,271
Total	39,488	3.95	137,905	0	137,905

TABLE 2 Summary of Ribes Eradication in Virginia by Working, Project and Year from 1928 to 1938 Inclusive

Classification	Year	Acres	Number of Ribes Destroyed			Total Man-Days labor	Total Cost	Acres Per man-days	Per Acre		
			Wild	Culti.	Total				No. of Ribes	No. of M-days	Cost
Working First	1928-31	4,187	13,584	2	13,586	-	\$ 384.66	-	3.2	-	0.092
	1932	2,248	16,281		16,281	-	173.51	-	7.2	-	0.077
	1933	19,818	253,172		253,172	2,761.	8,937.53	7.17	12.8	0.14	0.450
	1934	104,957	1015,674	13,925	1,029,599	11,308.0	29,984.35	9.27	9.8	0.107	0.284
	1935	92,327	1227,194	8,910	1,236,104	13,310	30,971.67	6.93	13.4	0.144	0.335
	1936	101,047	867,120	17,925	885,045	9,757.5	16,621.38	10.92	8.8	0.096	0.165
	1937	153,502	331,647	5,891	337,538	5,916.8	9,923.70	25.9	2.2	0.38	0.064
	1938	71,868	665,234	3,952	669,186	8,139	12,615.22	8.91	9.3	0.113	0.17
Total		549,954	4,389,906	50,605	4,440,511	51,192.3	109,612.02	10.75	8.1	0.093	0.199
Second	1932	600	19,993	-	19,993		50.00		33.3	-	.083
	1933	2,950	8,873	-	8,873	150.0	336.05	19.65	3.0	0.051	.114
	1934	3,669	39,076	-	39,076	576.0	776.58	6.37	10.6	0.157	.212
	1935	491	87,576	53	87,629	356.0	749.38	1.38	177.9	0.725	1.50
	1936	6,905	143,591	-	143,591	2,575.5	4,403.01	2.68	20.8	0.373	.642
	1937	13,183	745,660	-	745,660	6,965.1	11,701.20	1.89	56.5	0.528	0.89
	1938	3,678	82,553	12	82,565	1,725.0	2,710.75	2.13	22.4	0.469	0.73
Total		31,476	1,127,322	65	1,127,387	12,347.6	20,726.97	2.55	35.7	0.392	0.66
Third	1937	3,380	18,937	-	18,937	638.4	1,016.81	5.29	5.6	0.188	0.301
	1938	2,700	30,421	-	30,421	825.0	1,305.85	3.27	11.2	0.305	0.48
Total		6,080	49,358	-	49,358	1,463.4	2,322.66	4.15	8.11	0.241	0.382
Total All Workings		587,510	5,566,586	50,670	5,617,256	65,003.	\$132,661.65	9.00	9.57	0.110	0.226

Production		Value		Quantity		Price	
Item	Value	Item	Value	Item	Quantity	Item	Price
Wheat	1,234,567	Wheat	1,234,567	Wheat	1,234,567	Wheat	1,234,567
Barley	567,890	Barley	567,890	Barley	567,890	Barley	567,890
Oats	345,678	Oats	345,678	Oats	345,678	Oats	345,678
Rye	123,456	Rye	123,456	Rye	123,456	Rye	123,456
Buckwheat	98,765	Buckwheat	98,765	Buckwheat	98,765	Buckwheat	98,765
Millet	76,543	Millet	76,543	Millet	76,543	Millet	76,543
Sorghum	65,432	Sorghum	65,432	Sorghum	65,432	Sorghum	65,432
Maize	54,321	Maize	54,321	Maize	54,321	Maize	54,321
Coarse Grains	43,210	Coarse Grains	43,210	Coarse Grains	43,210	Coarse Grains	43,210
Fine Grains	32,109	Fine Grains	32,109	Fine Grains	32,109	Fine Grains	32,109
Total	2,345,678	Total	2,345,678	Total	2,345,678	Total	2,345,678
Wheat	1,234,567	Wheat	1,234,567	Wheat	1,234,567	Wheat	1,234,567
Barley	567,890	Barley	567,890	Barley	567,890	Barley	567,890
Oats	345,678	Oats	345,678	Oats	345,678	Oats	345,678
Rye	123,456	Rye	123,456	Rye	123,456	Rye	123,456
Buckwheat	98,765	Buckwheat	98,765	Buckwheat	98,765	Buckwheat	98,765
Millet	76,543	Millet	76,543	Millet	76,543	Millet	76,543
Sorghum	65,432	Sorghum	65,432	Sorghum	65,432	Sorghum	65,432
Maize	54,321	Maize	54,321	Maize	54,321	Maize	54,321
Coarse Grains	43,210	Coarse Grains	43,210	Coarse Grains	43,210	Coarse Grains	43,210
Fine Grains	32,109	Fine Grains	32,109	Fine Grains	32,109	Fine Grains	32,109
Total	2,345,678	Total	2,345,678	Total	2,345,678	Total	2,345,678

TABLE 2 (Continued) SUMMARY OF WILDS ERADICATION BY WORKING, PROJECT AND YEAR FROM 1925 TO 1938 INCLUSIVE

Classification	Year	Acres	Number of Wilds Destroyed			Total Man-days Labor	Total Cost	Acres per Man-days	Per Acre		
			Wild	Multi.	Total				No. of Wilds	No. of Man-days Cost	
PROJECT											
Regular	1928-'31	4,157	13,584	2	13,586	-	334.66	-	3.2	-	0.092
	1932	2,843	36,274	-	36,274	-	223.51	-	12.7	-	0.078
	1933	2,591	6,516	-	6,516	35.0	131.25	74.1	2.5	0.014	0.051
	1936	600	3,000	-	3,000	40.5	152.00	9.99	5.0	0.101	0.253
	1937	8	258	-	258	11.7	27.65	0.68	32.2	0.014	3.44
	1938	22	614	-	614	31.	300.60	0.71	27.7	1.415	13.70
Total		10,256	60,246	2	60,248	138.2	1,219.67	66.2(1)	5.87	1.010	0.119
WPA Including S. C. S.											
	1935	41,379	143,517	1,636	145,153	5,579.0	7,735.51	12.3	3.50	1.0316	0.177
	1936	104,360	904,199	17,914	922,113	10,118.5	16,184.29	10.2	6.53	0.097	0.155
	1937	109,927	1,095,449	5,891	1,101,340	13,468.1	22,524.14	12.6	6.43	0.079	0.132
	1938	77,504	751,787	3,964	755,751	10,382	15,821.22	7.5	9.8	0.137	0.21
Total		393,170	2,895,052	29,410	2,924,462	37,443.6	62,267.16	10.6	7.44	0.095	0.15
F. W. A.											
	1934	42,584	400,474	13,925	414,399	4,152.0	19,128.29	22.4	4.6	0.044	0.207
	1935	31,016	311,574	7,302	318,876	1,339.0	7,337.02	23.7	10.20	0.042	0.230
Total		124,400	712,048	21,227	733,275	5,491.0	26,465.31	22.7	5.16	0.044	0.212
C. C. C.											
	1933	20,177	255,529	-	255,529	2,074.0	9,142.33	7.0	12.7	0.142	0.453
	1934	16,042	644,276	-	644,276	7,752.0	11,652.44	205	40.3	0.453	0.724
	1935	19,623	899,679	25	899,704	8,952.0	16,648.52	2.1	13.8	0.474	0.848
	1936	2,932	103,312	6	103,318	2,144.0	4,688.10	1.4	34.6	0.719	0.57
	1937	150	457	-	457	43.5	87.92	2.1	3.36	0.311	0.674
	1938	729	23,807	-	23,807	276	510.00	2.6	35.8	0.384	0.709
Total		69,654	1,891,240	31	1,891,271	22,055.5	42,709.51	2.7	31.7	0.370	0.715
Total Emergency Program											
		577,254	5,506,340	50,668	5,557,008	64,805	131,441.08	8.9	9.62	0.112	0.228
GRAND TOTAL		577,510	5,566,586	50,670	5,617,256	65,003	132,661.65	9.0	9.57	0.119	0.226
YEAR											
	1928-'31	4,157	13,584	2	13,586	-	334.66	-	3.24	-	0.092
	1932	2,843	36,274	-	36,274	-	223.51	-	12.77	-	0.078
	1933	22,768	262,045	-	262,045	2,911.0	9,273.58	7.8	11.50	0.128	0.407
	1934	108,626	1,054,750	13,925	1,068,675	11,334.0	30,780.93	9.14	9.64	0.109	0.294
	1935	92,013	1,314,770	8,963	1,323,733	13,666.0	31,721.05	6.8	14.26	0.147	0.541
	1936	107,952	1,010,711	17,925	1,028,636	12,333.0	21,024.39	8.6	9.53	0.114	0.202
	1937	170,065	1,094,244	5,891	1,100,135	13,520.8	22,641.71	12.6	6.44	0.079	0.132
	1938	78,246	773,208	3,964	782,172	10,639.	16,641.02	7.5	9.9	0.137	0.21
TOTAL		577,510	5,566,586	50,670	5,617,256	65,003	132,661.65	9.0	9.57	0.110	0.226

(1) This is not exact since man-days is omitted prior to 1933

[illegible]

100.000,00 3.12.97	20.8.99	5.07	ACORD 6.113	Interf
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275 25/1/2002, 20/02/02, 19 1.529, 070, 6.11 9124857 0.13 1.4467

TABLE 2 (Continued) Summary of Ribes Eradication in Virginia by Ownership and Years

Ownership	Year	Acres	Number of Ribes Destroyed			Total Man-days labor	Total Cost	Acres Per man-days	Per Acre			
			Wild	Culti.	Total				Number Ribes	Man-days	Acres	
Federal Government												
Nat'l Forests												
	1928-31	4,187	13,584	2	13,586	-	\$ 384.66	-	3.2	-	0.092	
	1932	1,335	26,073	-	26,073	-	145.00	-	19.5	-	0.109	
	1933	9,301	7,332	-	7,332	-	1,225.36	-	0.78	-	0.132	
	1934	7,148	26,027	-	26,027	1,050.0	1,528.92	6.8	3.64	0.147	0.213	
	1935	6,912	9,359	-	9,359	403.5	1,096.77	17.1	1.35	0.058	0.158	
	1936	17,287	349,917	1,008	350,925	2,966.0	5,174.59	5.8	20.3	0.171	0.299	
	1937	41,388	960,374	370	960,744	10,302.5	16,522.98	4.01	23.3	0.249	0.299	
	1938	35,418	485,300	1,665	486,965	7,207.3	11,397.15	4.9	13.7	0.203	0.32	
Total		122,976	1,877,966	3,045	1,881,011	21,929.3	37,475.43	5.6	15.36	0.178	0.305	
National Park		1933	3,958	243,240	0	243,240	-	7,656.02	-	61.5	0	1.933
	1934	6,949	605,224	0	605,224	6,534.	9,305.08	1.06	87.0	0.940	1.338	
	1935	12,711	850,345	-	850,345	8,548.5	15,551.75	1.47	66.8	0.673	1.223	
	1936	3,369	110,246	6	110,252	2,341.0	5,620.72	1.44	32.7	0.695	1.67	
	1937	615	6,381	0	6,381	282.5	494.48	2.16	10.4	0.460	0.820	
	1938	722	25,848	0	25,848	276.0	510.00	2.61	35.8	0.382	0.71	
Total		28,324	1,841,284	6	1,841,290	17,982	39,138.05	1.57	65.0	0.634	1.38	
Semi Total												
All Federal Lands		151,300	3,719,250	3,051	3,722,301	39,911.0	76,613.48	3.7	24.6	0.264	0.503	
Municipal		1936	600	3,000	-	3,000	60.5	150.00	9.9	5.	0.10	0.25
	1937	85	-	-	-	-	-	-	0	0	0	
	1938	3,648	-	-	-	2.0	5.12	1824.0	0	0.0005	0.0014	
Total		4,333	3,000	-	3,000	62.5	155.12	69.1	0.69	0.014	0.036	
Private Lands		1932	1,513	10,201	-	10,201	-	78.11	-	6.7	-	0.51
	1933	9,509	11,473	-	11,473	2,911	392.20	3.26	1.21	0.306	0.041	
Includes some	1934	94,529	423,499	13,925	437,424	4,300	19,926.93	21.9	4.62	0.055	0.211	
State and	1935	73,195	455,066	8,963	464,029	4,714	15,072.53	15.5	6.34	0.064	0.206	
Municipal from	1936	86,696	547,548	16,911	564,459	6,965.5	10,079.08	12.4	6.52	0.080	0.124	
1932 to 1935	1937	127,977	129,489	5,521	135,010	2,935.3	5,624.25	43.6	1.05	0.023	0.044	
Inclusive	1938	38,458	267,060	2,299	269,359	3,204.	4,719.55	12.0	7.01	0.083	0.12	
Total		431,877	1,844,336	47,619	1,891,955	25,029.8	55,892.65	17.2	4.38	0.058	0.129	
GRAND TOTAL												
All Lands		587,510	5,566,586	50,670	5,617,256	65,003	132,661.25	9.0	9.57	0.110	0.226	

Fiscal Year	Expenditures by Function				Total
	General Government	Public Welfare	Public Works	Public Safety	
1958	1,000,000	2,000,000	1,000,000	500,000	4,500,000
1959	1,100,000	2,100,000	1,100,000	550,000	4,850,000
1960	1,200,000	2,200,000	1,200,000	600,000	5,200,000
1961	1,300,000	2,300,000	1,300,000	650,000	5,550,000
1962	1,400,000	2,400,000	1,400,000	700,000	5,900,000
1963	1,500,000	2,500,000	1,500,000	750,000	6,250,000
1964	1,600,000	2,600,000	1,600,000	800,000	6,600,000
1965	1,700,000	2,700,000	1,700,000	850,000	6,950,000
1966	1,800,000	2,800,000	1,800,000	900,000	7,300,000
1967	1,900,000	2,900,000	1,900,000	950,000	7,650,000
1968	2,000,000	3,000,000	2,000,000	1,000,000	8,000,000
1969	2,100,000	3,100,000	2,100,000	1,050,000	8,350,000
1970	2,200,000	3,200,000	2,200,000	1,100,000	8,700,000
1971	2,300,000	3,300,000	2,300,000	1,150,000	9,050,000
1972	2,400,000	3,400,000	2,400,000	1,200,000	9,400,000
1973	2,500,000	3,500,000	2,500,000	1,250,000	9,750,000
1974	2,600,000	3,600,000	2,600,000	1,300,000	10,100,000
1975	2,700,000	3,700,000	2,700,000	1,350,000	10,450,000
1976	2,800,000	3,800,000	2,800,000	1,400,000	10,800,000
1977	2,900,000	3,900,000	2,900,000	1,450,000	11,150,000
1978	3,000,000	4,000,000	3,000,000	1,500,000	11,500,000
1979	3,100,000	4,100,000	3,100,000	1,550,000	11,850,000
1980	3,200,000	4,200,000	3,200,000	1,600,000	12,200,000
1981	3,300,000	4,300,000	3,300,000	1,650,000	12,550,000
1982	3,400,000	4,400,000	3,400,000	1,700,000	12,900,000
1983	3,500,000	4,500,000	3,500,000	1,750,000	13,250,000
1984	3,600,000	4,600,000	3,600,000	1,800,000	13,600,000
1985	3,700,000	4,700,000	3,700,000	1,850,000	13,950,000
1986	3,800,000	4,800,000	3,800,000	1,900,000	14,300,000
1987	3,900,000	4,900,000	3,900,000	1,950,000	14,650,000
1988	4,000,000	5,000,000	4,000,000	2,000,000	15,000,000
1989	4,100,000	5,100,000	4,100,000	2,050,000	15,350,000
1990	4,200,000	5,200,000	4,200,000	2,100,000	15,700,000
1991	4,300,000	5,300,000	4,300,000	2,150,000	16,050,000
1992	4,400,000	5,400,000	4,400,000	2,200,000	16,400,000
1993	4,500,000	5,500,000	4,500,000	2,250,000	16,750,000
1994	4,600,000	5,600,000	4,600,000	2,300,000	17,100,000
1995	4,700,000	5,700,000	4,700,000	2,350,000	17,450,000
1996	4,800,000	5,800,000	4,800,000	2,400,000	17,800,000
1997	4,900,000	5,900,000	4,900,000	2,450,000	18,150,000
1998	5,000,000	6,000,000	5,000,000	2,500,000	18,500,000
1999	5,100,000	6,100,000	5,100,000	2,550,000	18,850,000
2000	5,200,000	6,200,000	5,200,000	2,600,000	19,200,000
2001	5,300,000	6,300,000	5,300,000	2,650,000	19,550,000
2002	5,400,000	6,400,000	5,400,000	2,700,000	19,900,000
2003	5,500,000	6,500,000	5,500,000	2,750,000	20,250,000
2004	5,600,000	6,600,000	5,600,000	2,800,000	20,600,000
2005	5,700,000	6,700,000	5,700,000	2,850,000	20,950,000
2006	5,800,000	6,800,000	5,800,000	2,900,000	21,300,000
2007	5,900,000	6,900,000	5,900,000	2,950,000	21,650,000
2008	6,000,000	7,000,000	6,000,000	3,000,000	22,000,000
2009	6,100,000	7,100,000	6,100,000	3,050,000	22,350,000
2010	6,200,000	7,200,000	6,200,000	3,100,000	22,700,000
2011	6,300,000	7,300,000	6,300,000	3,150,000	23,050,000
2012	6,400,000	7,400,000	6,400,000	3,200,000	23,400,000
2013	6,500,000	7,500,000	6,500,000	3,250,000	23,750,000
2014	6,600,000	7,600,000	6,600,000	3,300,000	24,100,000
2015	6,700,000	7,700,000	6,700,000	3,350,000	24,450,000
2016	6,800,000	7,800,000	6,800,000	3,400,000	24,800,000
2017	6,900,000	7,900,000	6,900,000	3,450,000	25,150,000
2018	7,000,000	8,000,000	7,000,000	3,500,000	25,500,000
2019	7,100,000	8,100,000	7,100,000	3,550,000	25,850,000
2020	7,200,000	8,200,000	7,200,000	3,600,000	26,200,000
2021	7,300,000	8,300,000	7,300,000	3,650,000	26,550,000
2022	7,400,000	8,400,000	7,400,000	3,700,000	26,900,000
2023	7,500,000	8,500,000	7,500,000	3,750,000	27,250,000
2024	7,600,000	8,600,000	7,600,000	3,800,000	27,600,000
2025	7,700,000	8,700,000	7,700,000	3,850,000	27,950,000
2026	7,800,000	8,800,000	7,800,000	3,900,000	28,300,000
2027	7,900,000	8,900,000	7,900,000	3,950,000	28,650,000
2028	8,000,000	9,000,000	8,000,000	4,000,000	29,000,000
2029	8,100,000	9,100,000	8,100,000	4,050,000	29,350,000
2030	8,200,000	9,200,000	8,200,000	4,100,000	29,700,000
2031	8,300,000	9,300,000	8,300,000	4,150,000	30,050,000
2032	8,400,000	9,400,000	8,400,000	4,200,000	30,400,000
2033	8,500,000	9,500,000	8,500,000	4,250,000	30,750,000
2034	8,600,000	9,600,000	8,600,000	4,300,000	31,100,000
2035	8,700,000	9,700,000	8,700,000	4,350,000	31,450,000
2036	8,800,000	9,800,000	8,800,000	4,400,000	31,800,000
2037	8,900,000	9,900,000	8,900,000	4,450,000	32,150,000
2038	9,000,000	10,000,000	9,000,000	4,500,000	32,500,000
2039	9,100,000	10,100,000	9,100,000	4,550,000	32,850,000
2040	9,200,000	10,200,000	9,200,000	4,600,000	33,200,000
2041	9,300,000	10,300,000	9,300,000	4,650,000	33,550,000
2042	9,400,000	10,400,000	9,400,000	4,700,000	33,900,000
2043	9,500,000	10,500,000	9,500,000	4,750,000	34,250,000
2044	9,600,000	10,600,000	9,600,000	4,800,000	34,600,000
2045	9,700,000	10,700,000	9,700,000	4,850,000	34,950,000
2046	9,800,000	10,800,000	9,800,000	4,900,000	35,300,000
2047	9,900,000	10,900,000	9,900,000	4,950,000	35,650,000
2048	10,000,000	11,000,000	10,000,000	5,000,000	36,000,000
2049	10,100,000	11,100,000	10,100,000	5,050,000	36,350,000
2050	10,200,000	11,200,000	10,200,000	5,100,000	36,700,000
2051	10,300,000	11,300,000	10,300,000	5,150,000	37,050,000
2052	10,400,000	11,400,000	10,400,000	5,200,000	37,400,000
2053	10,500,000	11,500,000	10,500,000	5,250,000	37,750,000
2054	10,600,000	11,600,000	10,600,000	5,300,000	38,100,000
2055	10,700,000	11,700,000	10,700,000	5,350,000	38,450,000
2056	10,800,000	11,800,000	10,800,000	5,400,000	38,800,000
2057	10,900,000	11,900,000	10,900,000	5,450,000	39,150,000
2058	11,000,000	12,000,000	11,000,000	5,500,000	39,500,000
2059	11,100,000	12,100,000	11,100,000	5,550,000	39,850,000
2060	11,200,000	12,200,000	11,200,000	5,600,000	40,200,000
2061	11,300,000	12,300,000	11,300,000	5,650,000	40,550,000
2062	11,400,000	12,400,000	11,400,000	5,700,000	40,900,000
2063	11,500,000	12,500,000	11,500,000	5,750,000	41,250,000
2064	11,600,000	12,600,000	11,600,000	5,800,000	41,600,000
2065	11,700,000	12,700,000	11,700,000	5,850,000	41,950,000
2066	11,800,000	12,800,000	11,800,000	5,900,000	42,300,000
2067	11,900,000	12,900,000	11,900,000	5,950,000	42,650,000
2068	12,000,000	13,000,000	12,000,000	6,000,000	43,000,000
2069	12,100,000	13,100,000	12,100,000	6,050,000	43,350,000
2070	12,200,000	13,200,000	12,200,000	6,100,000	43,700,000
2071	12,300,000	13,300,000	12,300,000	6,150,000	44,050,000
2072	12,400,000	13,400,000	12,400,000	6,200,000	44,400,000
2073	12,500,000	13,500,000	12,500,000	6,250,000	44,750,000
2074	12,600,000	13,600,000	12,600,000	6,300,000	45,100,000
2075	12,700,000	13,700,000	12,700,000	6,350,000	45,450,000
2076	12,800,000	13,800,000	12,800,000	6,400,000	45,800,000
2077	12,900,000	13,900,000	12,900,000	6,450,000	46,150,000
2078	13,000,000	14,000,000	13,000,000	6,500,000	46,500,000
2079	13,100,000	14,100,000	13,100,000	6,550,000	46,850,000
2080	13,200,000	14,200,000	13,200,000	6,600,000	47,200,000
2081	13,300,000	14,300,000	13,300,000	6,650,000	47,550,000
2082	13,400,000	14,400,000	13,400,000	6,700,000	47,900,000
2083	13,500,000	14,500,000	13,500,000	6,750,000	48,250,000
2084	13,600,000	14,600,000	13,600,000	6,800,000	48,600,000
2085	13,700,000	14,700,000	13,700,000	6,850,000	48,950,000
2086	13,800,000	14,800,000	13,800,000	6,900,000	49,300,000
2087	13,900,000	14,900,000	13,900,000	6,950,000	49,650,000
2088	14,000,000	15,000,000	14,000,000	7,000,000	50,000,000
2089	14,100,000	15,100,000	14,100,000	7,050,000	50,350,000
2090	14,200,000	15,200,000	14,200,000	7,100,000	50,700,000
2091	14,300,000	15,300,000	14,300,000	7,150,000	51,050,000
2092	14,400,000	15,400,000	14,400,000	7,200,000	51,400,000
2093	14,500,000	15,500,000	14,500,000	7,250,000	51,750,000
2094	14,600,000	15,600,000	14,600,000	7,300,000	52,100,000
2095	14,700,000	15,700,000	14,700,000	7,350,000	52,450,000
2096	14,800,000	15,800,000	14,800,000	7,400,000	52,800,000
2097	14,900,000	15,900,000	14,900,000	7	



White Pine Plantation on North River in Augusta
County, George Washington National Forest.
No. 9070.

TABLE I. WEST VIRGINIA Summary of Ribes Eradication in 1938 By Working, Project and Ownership

By Working	Acreage Worked	No. of Ribes Destroyed			No. 8 hour man-days	Total Cost	Number Acres per man- days	Per Acre		
		Wild	Culti.	Total				No. Ribes	Number Man-days	Cost
First	149,287	810,546	4,428	814,974	6,905	\$23,552.40	20.7	5.46	.0463	0.157
Second	9,931	8,865	4	8,869	235	893.79	42.4	0.89	.0237	0.09
Third		None								
Total	159,218	819,411	4,432	823,843	7,140	\$24,446.19	22.3	5.16	0.045	0.153
Regular	3,702	22,842	0	22,842	244	792.72	15.17	6.18	0.066	0.293
W. P. A	148,150	607,552	4,430	611,982	5,358	20,211.33	27.7	4.12	0.036	0.136
C. C. C.	7,366	189,017	2	189,019	1,538	3,442.14	4.8	25.67	0.209	0.468
Total	159,218	819,411	4,432	823,843	7,140	24,446.19	22.3	5.16	0.045	0.153
By Ownership										
Federal	9,848	46,572	40	46,612	403	1,508.36	21.9	4.73	.041	0.153
State	2,629	37,930	0	37,930	85	309.69	30.9	14.42	.032	0.114
Private	146,741	734,909	4,392	739,301	6,652	22,628.14	22.1	5.03	.045	0.154
Total	159,218	819,411	4,432	823,843	7,140	\$24,446.19	22.3	5.16	0.045	0.153

By Working		By Balance		Total	
Debit	Credit	Debit	Credit	Debit	Credit
100.00		100.00		100.00	
	100.00		100.00		100.00
200.00		200.00		200.00	
	200.00		200.00		200.00
300.00		300.00		300.00	
	300.00		300.00		300.00
400.00		400.00		400.00	
	400.00		400.00		400.00
500.00		500.00		500.00	
	500.00		500.00		500.00
600.00		600.00		600.00	
	600.00		600.00		600.00
700.00		700.00		700.00	
	700.00		700.00		700.00
800.00		800.00		800.00	
	800.00		800.00		800.00
900.00		900.00		900.00	
	900.00		900.00		900.00
1000.00		1000.00		1000.00	
	1000.00		1000.00		1000.00
Total		Total		Total	
5000.00		5000.00		5000.00	
	5000.00		5000.00		5000.00

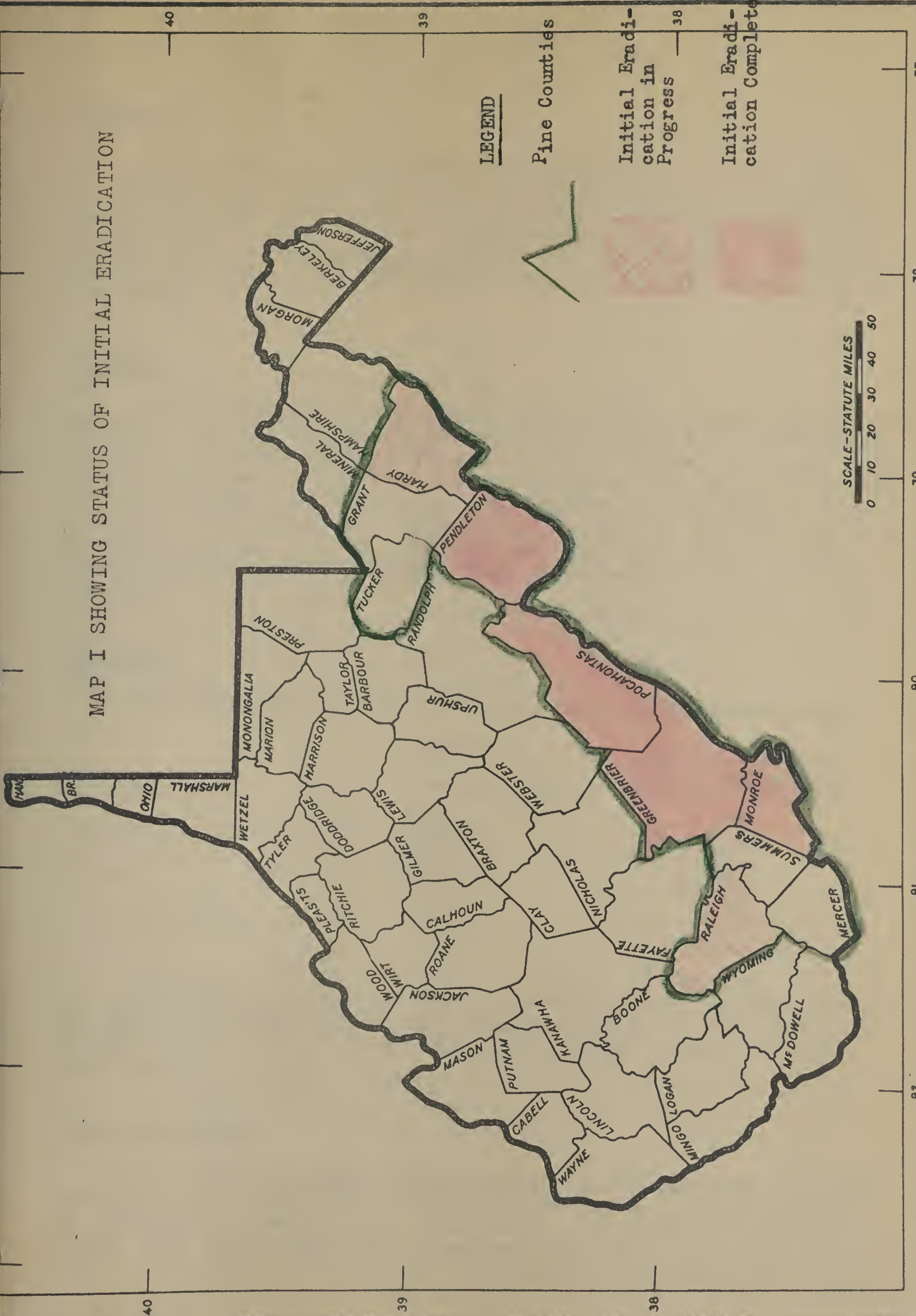
TABLE 2 (continued) Summary of Ribes Eradication in West Virginia, by Working, Ownership and years
From 1932 to 1938 Inclusive

Classification	Year	Acres	Number of Ribes Destroyed			Total Man-days labor	Total Cost	Acres per man- days	Per Acre		
			Wild	Culti.	Total				No. Ribes	Man- days	Cost
WORKING											
First	1932	268	2	-	2	-	\$ 24.35	-	.0075	-	0.091
	1933	4,256	60,748	-	60,748	635.0	1332.75	6.7	14.25	0.149	0.313
	1934	30,702	119,092	3,386	122,478	1,547.0	7,089.86	19.8	3.99	0.050	0.231
	1935	37,681	402,505	2,027	404,532	3,062.	10,529.74	12.0	10.68	0.081	0.280
	1936	75,813	314,106	394	314,500	4,330.1	14,001.11	15.7	4.15	0.064	0.184
	1937	168,374	567,557	1,293	568,850	7,631.0	25,267.58	22.0	3.4	0.045	0.150
	1938	149,287	810,546	4,428	814,974	6,905	23,552.40	20.7	5.46	.0463	0.157
Total		466,381	2,274,556	11,528	2,286,084	24,618.1	81,797.79	18.9	4.78	.053	0.175
Second	1934	2,482	12,587	-	12,587	361.0	485.75	6.89	5.07	0.150	0.196
	1936	11,115	61,933	-	61,933	989.4	3,055.89	11.2	5.57	0.089	0.275
	1937	20,719	72,695	4	72,699	578.0	1,937.97	35.8	3.5	0.028	0.071
	1938	9,931	8,865	4	8,869	235.	893.79	42.4	0.89	0.024	0.09
Total		44,247	156,080	8	156,088	2,163.4	6,373.40	12.05	3.53	0.049	0.152
GRAND TOTAL		510,628	2,430,636	11,536	2,442,172	26,781.5	88,171.19	19.0	4.79	0.053	0.173
OWNERSHIP											
Nat'l Forests											
Nat'l Forests	1933	606	36,932	-	36,932	386.0	496.00	1.6	61.0	0.637	\$.819
	1934	2,004	13,612	-	13,612	553.0	868.50	3.6	6.8	0.276	.433
	1935	6,931	52,258	-	52,258	655.	1,360.52	10.6	7.5	0.094	0.196
	1936	17,933	124,010	-	124,010	1,845.3	4,171.05	9.7	6.9	0.1031	0.233
	1937	53,864	231,972	139	232,111	2,174.0	6,483.37	24.8	4.3	0.040	0.110
	1938	9,848	46,572	40	46,612	403	1,508.36	24.4	4.73	.041	0.153
Total		91,186	505,356	179	505,535	6,016.3	14,887.80	15.15	5.54	.066	.163
State	1934	349	7,931	-	7,931	63.0	158.51	5.5	22.73	.181	0.454
	1936	2,619	23,183	-	23,183	142.0	364.88	18.4	8.9	.0543	0.139
	1937	5,783	20,814	58	20,872	407.0	990.77	14.2	3.6	.070	0.171
	1938	2,629	37,930	-	37,930	85	309.69	30.9	14.42	.032	0.114
Total		11,380	89,858	58	89,916	697.0	1,823.85	16.3	7.9	.061	.16
Private											
This may include work on State land thro' 1935	1932	268	2	-	2	-	24.35	-	.0075	-	0.091
	1933	3,650	23,816	-	23,816	249.0	836.75	14.7	6.53	0.068	0.229
	1934	30,831	110,136	3,386	113,522	1,292.0	6,548.60	23.8	3.68	0.042	0.212
	1935	30,750	350,247	2,027	352,274	2,407.0	9,169.22	12.8	11.46	0.078	0.296
	1936	66,376	228,846	394	229,240	3,840.0	12,521.07	17.3	3.5	.0578	0.189
	1937	129,446	387,466	1,100	388,566	5,628.0	19,731.41	23.0	3.0	.043	0.152
	1938	146,741	734,909	4,392	739,301	6,652	22,628.14	22.1	5.03	.045	0.154
Total		408,062	1,835,422	11,299	1,846,721	20,068.2	71,459.54	20.3	4.52	.049	0.175
GRAND TOTAL all lands		510,628	2,430,636	11,536	2,442,172	26,781.5	88,171.19	19.0	4.79	.053	0.173

TABLE 2 WEST VIRGINIA Summary of Ribes Eradication by Working, Project and Year
From 1932 to 1938 Inclusive

Classification	Year	Acres	No. of Ribes Destroyed			Total Man-days labor	Total Cost	Acres Per man- days	Per Acre		
			Wild	Culti.	Total				No. Ribes	Man- days Cost	
P R O J E C T											
Regular	1932	268	2	-	2	-	\$ 24.35	-	.0075	-	0.098
	1938	3,702	22,842	-	22,842	244	792.72	15.17	6.18	0.066	0.293
	Total	3,970	22,844	-	22,844	244	817.07	16.2	5.7	0.061	0.206
W. P. A.	1935	15,536	119,352	710	120,062	1,223	4,220.22	12.7	7.7	0.079	0.347
	1936	71,388	298,661	394	299,055	4,234.1	13,839.20	16.8	4.0	0.059	0.195
	1937	170,180	548,987	1,170	550,157	6,725.0	24,207.55	25.3	3.2	0.039	0.142
	1938	148,150	607,552	4,430	611,982	5,358	20,211.33	27.7	4.12	0.036	0.136
Total		405,254	1,574,552	6,704	1,581,256	17,540.1	62,478.30	23.3	3.9	0.043	0.153
P. W. A.	1934	30,831	110,136	3,386	113,522	1,274	6,518.60	24.2	3.7	0.041	0.212
	1935	15,214	230,895	1,317	232,212	1,136	4,948.70	13.4	15.2	0.075	0.322
Total		46,045	341,031	4,703	345,734	2,410	11,497.30	19.1	7.5	0.053	0.250
C. C. C.	1933	4,256	60,748	-	60,748	635.0	1,332.75	6.7	14.26	0.149	0.313
	1934	2,353	21,543	-	21,543	634.0	1,027.01	3.7	9.2	0.269	0.436
	1935	6,931	52,258	-	52,258	703.0	1,360.82	9.8	7.54	0.101	0.196
	1936	15,540	77,378	-	77,378	1,593.4	3,217.80	9.8	5.0	0.103	0.207
	1937	18,913	91,265	127	91,392	1,484.0	2,998.00	12.8	4.83	0.078	0.159
	1938	7,366	189,017	2	189,019	1,538	3,442.14	4.8	25.67	0.209	0.467
Total		55,359	492,209	129	492,338	6,587.4	13,378.52	8.3	8.9	0.119	0.242
Total											
Emergency Programs		506,658	2,407,792	11,536	2,419,328	26,537.5	87,354.12	19.3	4.75	0.052	0.172
GRAND TOTAL		510,628	2,430,636	11,536	2,442,172	26,781.5	88,171.19	19.0	4.79	0.053	0.173
Y E A R											
	1932	268	2	-	2	-	24.35	-	.0075	-	0.091
	1933	4,256	60,748	-	60,748	635.0	1,332.75	6.7	14.25	0.149	0.313
	1934	33,184	131,679	3,386	135,065	1,908.0	7,575.61	17.4	4.07	0.057	0.228
	1935	37,681	402,505	2,027	404,532	3,062.0	10,529.74	12.4	10.68	0.081	0.280
	1936	86,928	376,039	394	376,433	5,827.5	17,057.00	14.7	4.34	0.067	0.196
	1937	189,093	640,252	1,297	641,549	8,209.0	27,205.55	23.0	3.4	0.043	0.143
	1938	159,218	819,411	4,432	823,843	7,140	24,446.19	22.3	5.16	0.045	0.153
GRAND TOTAL		510,628	2,430,636	11,536	2,442,172	26,781.5	88,171.19	19.0	4.79	0.053	0.173

MAP I SHOWING STATUS OF INITIAL ERADICATION



AREAS ON MAINTENANCE

Delaware

All areas of white pine, both planted and native may be assumed to be on a maintenance basis, since no wild Ribes have been found near them, and since cultivated bushes near by are few or none. Up to December 31, 1938 the total area on maintenance amounted to 1,076 acres of which 82 acres were white pine, the remainder being in the 900 foot protective zone.

Georgia

Wild Ribes have been found only in the following counties, Murray, Gilmer, Fannin, Union and Towns, and only cultivated bushes have been located in the other counties, although many have been escaped bushes. We may consider therefore that all of the counties in the white pine region of the State, except the five mentioned above are on maintenance. Figures on this acreage are not yet at hand, but are being secured by the State leader who is compiling the pine ledger sheets for each county.

Maryland

Mr. Yost reports the following acreage on maintenance.

Year	Acreage placed on maintenance
1934	5,737
1935	98,122
1936	30,000
1937	17,937
1938	204

Total 152,000

Estimated acreage to place on maintenance 18,000 acres. He states "Approximately all acreage will be on maintenance by the end of 1941 disregarding white pine planted in the meantime."

North Carolina

Mr. Teague reports 923,870 acres on maintenance in North Carolina, of which 235,545 acres represents lands averaging 50 white pine trees or more per acre, and 122,657 represents lands with scattered pine averaging less than 50 white pine per acre. His table by Counties is given on the following page:

STATUS OF MAINTENANCE

Delaware

All areas of white pine, both planted and native, are assumed to be on a maintenance basis, since no wild alder have been found near them, and since cultivated areas last by are few or none. Up to December 31, 1938 the total area on maintenance amounted to 1,076 acres of which 62 acres were white pine, the remainder being in the 920 last projective zone.

Georgia

Wild alder have been found only in the following counties: Bartow, Gilmer, Harlan, Union and Towns, and only cultivated bushes have been located in the other counties. Although many have been located bushes, no any considerable numbers of the counties in the white pine region of the State, except the five mentioned above are on maintenance. Figures on this subject are not yet at hand, but are being secured by the State forester who is compiling the pine ledger sheets for each county.

Maryland

Mr. Tait reports the following acreage on maintenance.

Year	Average planted on maintenance
1934	8,737
1935	20,122
1936	30,000
1937	17,037
1938	818

Estimated average to plant on maintenance 18,000 acres. As stated "approximately all surveys will be on maintenance by the end of 1941 depending upon the time planned in the summer."

North Carolina

Mr. Tait reports 223,870 acres on maintenance in North Carolina, of which 130,115 acres represent lands awaiting to white pine trees or more pine trees, and 133,657 represent lands with scattered pine woods. From 20 white pine per acre. His table by counties is given on the following page:

NORTH CAROLINA COUNTIES ON MAINTENANCE

On December 31, 1938

Location	Area In Acres		Total Pine	Pine Plus Control Zone
	Over 5%	Under 5%		
Alexander	2,948	0	2,948	9,580
Alleghany	16,285	1,220	17,505	45,535
Furke	6,285	29,538	35,823	108,802
Caldwell	43,530	12,670	61,200	180,496
Cherokee	1,279	809	2,088	20,853
Clay	58	36	94	1,025
Graham	1,731	1,064	2,795	11,470
Henderson	23,813	21,093	44,911	166,285
Jackson	8,285	9,610	17,895	60,806
Macon	14,137	22,415	36,552	72,946
#McDowell	2,493	6,152	8,650	16,629
Polk	333	321	654	3,555
Rutherford	138	0	138	2,600
Surry	360	460	820	6,751
Swain	1,340	63	1,403	4,117
Transylvania	5,313	2,918	8,231	11,020
Wilkes	102,207	14,288	116,495	201,400
Total	235,545	112,657	358,202	923,870

This amount of acreage was put on maintenance in 1938.
 Balance of county put on maintenance early in 1939.
 No 1939 data shown on this sheet.

Tennessee
Mr. Tansley reports the following amounts which have been placed on maintenance by year:

Year	Average Placed on Maintenance
1933	10,177
1934	96,281
1935	14,070
1936	102,403
1937	150,831
1938	129,830
Total	593,196

For above data was received from pine area record sheets and from the pine ledger sheets.

Virginia

No definite statement can be made as yet concerning the total acreage which has been placed on maintenance in the various counties, since the pine ledger sheets have only been completed for six of seven counties. Ledger sheets for other counties are being compiled as fast as possible.

West Virginia

Mr. Roberts has furnished the following information concerning the acres placed on maintenance in West Virginia by year:

Year	Average Placed on Maintenance
1933	10,177
1934	96,281
1935	14,070
1936	102,403
1937	150,831
1938	129,830
Total	593,196

SIZE OF CREWS

Ribes Eradication

In answer to an inquiry to State leaders on September 28, 1938 concerning the Size of Crews the State Leaders sent the following information:

Georgia

"With reference to your Memorandum of September 28, 1938, I regret that this matter was overlooked and the information not furnished earlier.

In Georgia it is now, and has been, our policy to work small crews of from six to eight men. We have found this method of working more efficient than the method of working large crews."

Yours very truly,

/s/ W. V. Zimmer

Maryland

"Reference is made to your Memorandum of September 28th, regarding the size of crews. We have since the beginning been using eight men and one foreman, frequently there are less than eight men in the line and in rare instances nine, possibly ten.

You, of course, recall in Allegany and Washington County, where the work was of a scouting nature, we used two men and a foreman."

Yours very truly,

/s/ Henry E. Yost

North Carolina

"Reference is made to your Memorandum of September 28th, 1938 concerning the Size of our field crews. We have tried to maintain crews of eight or less throughout this year. There have been a few instances where for one or two days at a time there may have been as high as thirteen men in one crew, but our usual procedure is to divide the workers up into groups with not more than eight men in a group.

At the beginning of October we expect to have less than ten men in each county and it will mean that there will be an average of about eight men (or less) for each crew. In most cases the eight men will be divided into two groups and worked in crew of four men."

Yours very truly,

/s/ H. B. Teague

LINE ON CURE

Local Information

In answer to an inquiry to State leaders on September 20, 1938 concerning the size of crews the State leaders and the following information:

Answer:

With reference to your Memorandum of September 20, 1938, I regret that this matter was overlooked and the information not furnished earlier.

In Georgia it is now, and has been, our policy to work small crews of from six to eight men. We have found this method of working more efficient than the method of working large crews.

Yours very truly,

/s/ W. V. Kinner

Reply

Reference is made to your Memorandum of September 20th, regarding the size of crews. We have since the beginning been using small men and one person, frequently three or four men, and in the line and in the line of work, possibly four.

Now, of course, usually in Alabama and Washington County, where the work was of a mounting nature, we had two men and a "foreman."

Yours very truly,

/s/ Henry E. Lee

North Carolina

Reference is made to your Memorandum of September 20th, 1938 concerning the size of our field crews. We have tried to maintain crews of eight or ten throughout this year. There have been a few instances where there was no one left at a time there may have been as high as fifteen men in one crew, but our usual procedure is to divide the workers up into groups with not more than eight men in a group.

At the beginning of October we expect to have less than ten men in each county and it will mean that there will be an average of about eight men (or less) for each crew. In most cases the eight men will be divided into two groups and worked in crew of four men.

Yours very truly,

/s/ H. E. Lee

SIZE OF CREWS

Tennessee

In reply to Dr. Fracker's letter concerning the Size of Crews doing scouting, I wish to give the following statements from agents.

Mr. Skiles states that he uses from 15 to 20 men with two foreman supervising the work. This gives each foreman from seven to ten men to supervise. After Dr. Fracker made the suggestion that from two to four men follow after the main line and fill in when Ribes were found, the crews have done better work. The men that follow after the scouting crew check on the thoroughness of the scouting and fill in vacancies when Ribes are found, or pull the bushes and allow the line to continue.

Mr. Stegall, states that his eradication and scouting crews vary from four to eight men. The width of the strip being scouted or eradicated varies as to the number of men used in the crew and the number of Ribes being found. The scouting and eradicating crew work under the supervision of sub-foreman and foreman who follow along behind the crews and check on the thoroughness of their work.

Agent Lane uses from eight to 16 men in his scouting crews. These men work under the supervision of a field foreman and are followed by men who check the work and fill in the lines when vacancies occur. The number of men following the crew varies as to the size of the scouting crew.

Yours very truly,

/s/ R. D. Tanksley

Virginia

Reference is made to your letter of September 28th, 1939 relative to the Size of the Crew now operating in Virginia.

Our crews average from five to nine men on eradication and three to five on preeradication.

Most of these eradication crews average eight men as the scarcity of funds prohibit the increase of skilled labor that would be necessary if smaller crews were used.

Yours very truly,

/s/ J. B. Luce, Jr.,

In reply to Mr. Frank's letter concerning the size of
Crews being accounted, I wish to give the following statement
from myself.

Mr. Miller states that he has from 15 to 20 men with two
foremen supervising the work. This gives each foreman from seven
to ten men to supervise. After Dr. Frank made the suggestion for
from two to four men follow after the main line and fill in when
dikes were found, the crews have done better work. The men that
follow after the main line are on the responsibility of the
accounting and fill in vacancies when dikes are found, or until the
dikes are within the line to continue.

Mr. McGee, states that his station and accounting
crew very few from 10 to 15 men. The width of the strip being
accounted or estimated varies as to the number of men used in the
accounting the number of dikes being found. The accounting and
estimating crew work under the supervision of sub-foremen and
foremen who follow along behind the crew and check on the
responsibility of their work.

There have been from eight to 10 men in his accounting crew.
There are now under the supervision of a field foreman and crew
followed by men and check the work and fill in the gaps when
vacancies occur. The number of men following the crew varies
as to the size of the accounting crew.

Yours very truly,

/s/ H. D. Tankerley

Virginia

Reference is made to your letter of September 28th, 1939
relative to the size of the crew now operating in Virginia.

The crew average from five to nine men on operation and
three to five on transportation.

Due to these conditions even where there are as many
as twenty of these people the number of skilled labor that
would be necessary to maintain crews was small.

Yours very truly,
/s/ H. D. Tankerley

SIZE OF CREWSWest Virginia

Reference is made to your memorandum of September 28th, regarding size of crews.

The practice in West Virginia is to employ not more than five men on the line of an eradication crew with one checking behind the line. So far we have had no difficulty in obtaining enough men of foreman caliber from certified relief rolls to run crews of this size and our force in each county is arranged so that there is one rated man for every five relief employees.

Yours very truly,

/s/ J. M. Ashcroft

Bill of Costs

Page 10

Reference is made to your memorandum of September 20th, regarding the cost of the trial.

The question in this regard is to require not more than five men on the line of an expedition since the only thing that is required is to have one man on the line. The fact that we have had no difficulty in obtaining the necessary number of men is a fact which is not to be overlooked. It is also true that our work in each country is extremely difficult and our work is not only for every five men but also for every five men.

Very truly yours,

A. L. B. B. B.

NURSERY SANITATION

NURSERY SANITATION

Delaware

Two nurseries were inspected during the year 1938. Total acreage involved was 2,000 - number of white pines in nurseries, 2000, number of man-hours supervision 10.

Mr. Yost reports that he and Mr. Thomas F. Manns, Extension Pathologist of Delaware covered part of the 1500 ft. zone surrounding the Del-Mar-Va. Nursery and the State Department of Forestry Nursery which are adjacent to each other. No WPA labor was involved nor were there any wild or cultivated Ribes destroyed. Cultivated Ribes bushes were destroyed some years ago at the Del-Mar-Va Nursery.

Georgia

No nurseries were inspected during the year.

Maryland

This work was carried on at only one nursery; namely, the State Forest Nursery at Harrington Manor, Garrett Co., 924 Ribes were destroyed requiring 38 man-days of labor. This work was carried on by the WPA crews used on the regular eradication work. This was a second working of the area. No inspection work was considered necessary this year on the other nurseries in the State. A Federal permit however was required from four nurseries in Maryland and were issued to them.

North Carolina

Two nurseries were worked in 1938, namely; the Log Cabin Association Nursery near Sylva in Jackson County and the State Forest Nursery in Henderson County. The State Nursery was worked by the State Leader and the Private Nursery in Jackson County by WPA labor. Five man-days of labor were used and 40 cultivated Ribes bushes were destroyed. A total of 400 acres were covered by the two nurseries. No native Ribes were found within several miles of either nursery.

There were 550,000 white pine seedlings in the two nurseries worked, and an additional 151,000 trees were grown in the Soil Conservation Service Nursery at Chapel Hill. This latter nursery was worked in 1937 and found to be in a Ribes-free zone.

Mr. Teague reports:

"Most of the commercial white pine-growing nurseries in North Carolina have already been worked and all Ribes in the nurseries eradicated. As far as is known at the present,

The following are the names of the persons who have been appointed as members of the Wisconsin State Board of Agriculture for the year 1910.

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White pines as grown in Rockville Nursery in Maryland. This nursery has been protected from blister rust as have nearly all other white pine growing nurseries in the Southern Appalachian States. No. 6491.



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NURSERY SANITATION - VIRGINIA - 1933

County	Nurseries	Location	Initial or Rework Exam.	Roses Destroyed Wild: Cult: Tot.	Man-Days		Federal Costs		No. of Pine	Federal Permit	
					Crew	Ag't. Total	Crow: Agent: Total			Req'd	Iss'd
Fairfax	Westcott Forman's	Falls Church Fairfield Chapel	Rework 200		1.00	1.00	2.56	4.50	967	Yes	No
			Initial 520	24		1.00	10.00	10.00	165		
Hanover	Delwood	Ashland	Initial 520		.50	.5	5.00	5.00	27		
			"	1	1.50	1.5	15.00	15.00	257		
Augusta	Wynnesboro H. B. Jordan Fairfax Hall Wynnesboro	Lipscomb Staunton Waynesboro	Rework 250	32	2.00	2.00	9.00	9.00	183	Yes	Yes
			Initial 150	72	1.00	1.50	2.24	6.75	50		
			"	1	1.00	1.00	4.50	4.50	250		
Albemarle	State For.	Charlottesville	Rework 165		.50	.50	3.00	3.00	168,900	Yes	Yes
Amherst	Preston Edwards	Sweet Briar	Initial 165		1.00	1.00	4.26	6.60	11		
Roanoke	Hedge Lawn Blue Ridge Gardens	Roanoke	Initial 300	3	.25	.25	1.20	1.30	62		
			"		.50	.50	2.72	4.66	18		
Campbell	Evergreen Campbell Co.	Lynchburg	"	161	1.00	1.0	4.72	4.72	700		
			"		.50	.5	2.36	2.36	3		
Botetourt	C. E. Kinzie	Cleverdale	"	161	.50	1.0	7.25	9.61	25		
			"		.25	.25	1.20	1.30	13		
Pittsylvania	Alta Vista Soil Conser.	Chatham	Rework 200		1.00	1.00	4.06	6.00	910	Yes	Yes
			Initial 200		.50	.50	2.23	3.25	92,000		

Species	Length	Wing	Tail	Culmen	Bill	Weight	Sex	Age	Notes
1. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
2. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
3. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
4. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
5. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
6. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
7. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
8. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
9. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature
10. Red-tailed Tropicbird	180	100	60	15	10	150	♂	Ad	Immature

all white pine-growing nurseries in the Blister Rust Control area in the State have been cleared of Ribes. There are one or two nurseries growing white pine within less than 1,500 feet of the cultivated Ribes, located on other private property. The owners of these bushes refused to allow the bushes to be destroyed when the nursery was worked initially. Repeated follow-up calls were effective in connection with some of the nurseries in getting the approval of the owners to eradicate their bushes, after they had refused during the initial interview. There are some nurseries outside the BRC area growing a few ornamental white pines for sale, and most of these nurseries have not yet been worked. The nurseries referred to are near Statesville, Salisbury, Winston-Salem and Reidsville. These nurseries are out of our usual work territory, and have not been contacted by our agents; therefore it is not known whether or not any Ribes bushes are within 1,500 ft. of the white pines."

Tennessee

Only one nursery was inspected during 1938; namely, the Bledsoe State Forest Nursery near Pikeville. This nursery was scouted and mapped - the total control zone including the nursery amounted to 352 acres. Fourteen cultivated Ribes bushes were found, which had been missed in previous years. These were destroyed. 150,000 white pine seedlings are being raised for planting in the State.

Virginia

In 1938 there was an increase of 13 nurseries inspected over prior years. Wild Ribes were not found in any of the new nurseries although escaped bushes were located near Forman's Nursery in Fairfax County. 267 cultivated bushes were removed from infection range of the nurseries initially inspected and 52 from the nurseries reworked. All of these 52 bushes were removed from the Waynesboro Nursery near Lipscomb in Augusta County. Twenty of the bushes were sprouts from Yellow flowering currants eradicated in 1937. The remaining 32 were wild bushes.

In the 19 nurseries inspected 319 bushes were removed from 5,610 acres of land examined with a total of 24.5 crew and agent man-days, at an estimated wage cost of \$145.72.

In the nurseries inspected there were approximately 264,933 white pines.

All white pine-growing nurseries in the United States are now in the State have been cleared of them. There are one or two nurseries growing white pine within less than 1,000 feet of the United States, located on other private property. The owners of these nurseries refused to allow the insects to be destroyed when the nursery was worked initially. Reported follow-up calls were effective in connection with some of the nurseries in getting the approval of the owners to eradicate their nurseries, after they had returned during the initial inspection. There are some nurseries outside the United States growing a few commercial white pine for sale, and some of these nurseries have not yet been visited. The nurseries referred to are near Louisville, Kentucky, Winston-Salem and Raleigh. These nurseries are one of our usual work territory, and have not been contacted by our agents; therefore it is not known whether or not they have insects or not within 1,000 feet of the white pine.

Tennessee

Only one nursery was inspected during 1958; namely, the Madison State Nursery near Knoxville. This nursery was inspected and sampled - the total control home collection. The nursery amounted to 352 acres. Fourteen cultivated pines included were found, which had been raised in previous years. These were destroyed. 150,000 white pine seedlings are being raised for planting in this State.

Virginia

In 1958 there was an increase of 14 nurseries inspected over 1957 years. Wild pines were not found in any of the new nurseries although several nurseries were located near Loudoun's Nursery in Loudoun County. 387 cultivated pines were removed from infected areas of the nurseries initially inspected and 22 from the nurseries reported. All of these 23 pines were removed from the Loudoun's Nursery near Loudoun in Loudoun County. Twenty of the pines were removed from Loudoun's Nursery reported in 1957. The remaining 23 were left in place.

In the 19 nurseries inspected 319 pines were removed from 1,010 acres of land examined with a total of 24.5 acres and spent money, as an estimated total cost of \$105.75.

In the nurseries inspected there were approximately 24,573 white pines.

Virginia (continued)

Federal permits were requested for six Virginia Nurseries but only five permits were issued.

West Virginia

The United States Forest Service at Parsons, West Virginia was reworked in 1958. The 571 acres within the quarantine zone were covered, between the dates March 28 and April 22. The work was done with ERA labor and supervised by Mr. R. G. Pennington. The cost of 124 man-hours of supervision and 435 man-hours of labor amounting to \$242.20 was borne by the United States Forest Service. The bushes pulled amounted to 2,629 of which 2,592 were wild and 37 cultivated. The nursery's application for a permit to ship interstate was approved.

One other nursery, the West Virginia State Forest Nursery at Lesage, West Virginia, applied for and was granted a permit to ship interstate although no eradication work was done there. This nursery is located in an area apparently free of wild Ribes.

ST	74	WEST VIRGINIA FOREST SERVICE
81A	3	
401	2 1/2 10 7	All 1000 bushes from Lesage Nursery's plant
81	80	Lesage Nursery from the 1000 bushes plant
82	100	Nursery from the 1000 bushes plant
81A	1	
81B	81	
Total from	207	
Quarantine zone	1000	Quarantined by the State, now in private hands
Quarantine zone	170	Quarantined by the State, now in private hands
Grand Total		
(21) Bushes	1000	

ST = 1000 & 1000 bushes cultivated bushes.

Virginia (continued)

Several permits were requested for the Virginia
Maritime but only five permits were issued.

West Virginia

The United States Forest Service at Raleigh, North
Carolina was requested in 1958. The 571 acres within the
National Forest were covered. Between the dates March 28
and April 22, the work was done with 500 labor and super-
vised by Mr. R. J. Pennington. The cost of 135 man-hours
of supervision and 135 man-hours of labor amounting to
\$252.50 was borne by the United States Forest Service.
The permits pulled amounted to \$252 of which \$135 were
paid and \$117 collected. The survey's application for a
permit to ship interstate was approved.

On other permits, the West Virginia State Forest
Service at Raleigh, North Carolina, applied for and was
issued a permit to ship interstate although no specific
action was taken there. This permit is located in
an area separately free of title.

RECORD OF BUSHES PULLED IN
NURSERY SANITATION WORK
AT PARSONS, W. VA.

1938

Control Area Block Number	Number of Bushes Pulled	Remarks
1	40	
2	60	
7DEG	16	
12	6C	Flowering currant sprouts 6" in height.
13	2	
31F	2	
32	12	
37	3C	Cultivated Currants
38A	2	
38B	6 & 15 C	15 red currants from Gaston Poling's place
39	3C	Large currants from C. C. Keller's place
40	10C	Currants from Plum Phillip's place
41A	1	
41B	29	
Inside Zone	207	
Outside Zone	2252	Pulled by training crew on point between Roaring Run and road to Hambleton
Outside Zone	170	Pulled on hillside above Forest Service road, adjacent to Block 41A.
Grand Total All Bushes	2629	

"C" - After a number indicates Cultivated Bushes.

Prepared by
Dr. J. M. Ashcroft

FIELD STUDIES

STUDIES OF DORMANT ERADICATION OF RIBES IN MARYLAND

A study was made in Maryland to determine the comparative efficiency of initial Ribes eradication during the spring, summer and dormant season on skunk currants and gooseberries *R. rotundifolium* and *R. cynosbati*. Some of these plots were initially worked during the dormant season, others during the summer and the third group during the spring when the leaves first appeared on the Ribes. All of the plots were reworked during the first spring following the initial eradication.

It was found that with all species approximately 83% of the total Ribes destroyed were found during the dormant season and over 95% of the total Ribes destroyed could be located during the spring or summer season. More than 90% of the Live Stem was destroyed during the dormant season, and over 97% of the Live Stem was destroyed during the spring and summer seasons.

The Ribes were heavily concentrated on all the plots and in no case was the Live Stem reduced to a reasonably safe figure by dormant eradication. Despite the fact a large percentage of Ribes and Live Stem was destroyed on initial work, it was found that over 100 and 270 feet of Live Stem respectively on gooseberries and skunk currants was left after the dormant working.

The study showed that in heavy Ribes concentration when the ground is not frozen that it may be practical to do dormant eradication, but that a finished job cannot be expected under these conditions.

Inventory - 2014

Inventory - 2014

Item	QTY	UNIT	PRICE	TOTAL	DATE	BY
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FIELD DATA

Virginia

Ribes Regeneration on Logged-Off Pine Lot:

This plot was laid out for the purpose of studying the comeback of *Ribes* in number and in height growth of an area formerly well covered with white pine but recently logged.

This plot may be reached by driving up the North River road from Stokesville until reaching the upper or western end of the Leading Ridge road. From the junction of these roads go south 18° west for a distance of three hundred and forty (340) feet to hickory stump which is near center of plot and is compass about nine miles above Stokesville at the Peter Seay place, one mile below Camp Todd, the Forest Service Ranger Station. See pine area record sheet #2, for Augusta County (Private Land File) and detail map of study plot.

Before being logged off the forest consisted of white pine, hickories, hemlock, poplar and locust with considerable sassafras. Hickories predominated in estimated board feet. See Exhibit-B, page 33.

The area was cut over in the winter of 1934-1935. An estimated 8,000 board feet per acre was the yield. See accompanying estimates by G. C. Cramer, agent.

After cutting, the forest is predominately white pine sassafras and hemlock. With maples, butternuts, hickories, chestnuts, ash, birch, poplar and locust present in lesser numbers. In age it ranges from six to eighteen years.

The *Ribes cynosbati* in the plot were removed first in 1934 by PWA workers in a general crew working of the area. Again in 1936 after the area had been logged over, the plot was included in a crew working of the area.

The plot lies in a flat bottom in rocky soil with little underbrush present. It lays around an old camp site with approximately two-tenths (2/10) of an acre in sod. About half of the plot lies in shade. The other half is exposed to the direct sunlight.

In laying out the plot, which is one half of an acre, the corners were marked by three pyramids of rock and one stump - all painted white. The boundary lines were spotted with white paint.

All the Ribes on the area were of the cynosbati species. They were marked by white painted stakes and all were located in reference to the location stump by compass bearings and feet. The Ribes were shown on the detailed map as drawn by Agent Cramer. These bushes were found when the plots was laid out.

On the first examination made on August 23, 1937, the number of Ribes and feet of live stem in each were noted.

Exhibit A following this text gives tabulated results of the findings on the second examination. One new Ribes was located. This contained 7" of live stem. There was an increase of 12' 11" in live stem during the year, or approximately 123% increase.

No infections have been found on the Ribes or white pine at this site.

As yet no worthwhile deductions can be made, but apparently Ribes do not tend to come up in or near the brush piles more than in the open rocky spots.

No fruit was borne on the bushes this year.

A re-examination of the plots is scheduled on August 15, 1939.

J. G. Luce, Jr.,

RIBES STUDY PLOT
PINE AREA NO. 2
Peter Seay Place

October 13, 1938

Augusta County - Virginia

Quadrangle Staunton

Elevation 2500 feet

Location and Growth of Ribes

Number	Bearing	Chains	Links	Feet	Feet	Heights	Growth
				Live Stem 1937	Live Stem 1938	in 1938	in 1938
1	N 10 E	1	23	3'1"	4'9"	2'1"	1'8"
2	N 15 E	1	39	1'4"	1'7"	11"	3"
3	S 68 E		81	5"	9"	9"	4"
4	S 66 E		82	8"	3'2"	11"	2'6"
5	S 65 E		83	11"	1'6"	10"	7"
6	S 65 E		82	4"	1'1"	1'1"	9"
7	S 62 E		83	5"	1'10"	2'2"	1'5"
8	S 65 E	1	7	2"	1'5"	10"	1'3"
9	S 40 E		58	5"	5"	5"	0
10	S 40 E		64	5"	9"	9"	4"
11	S 38 E		85	1"	3"	3"	2"
12	S 35 E		46	4"	1'5"	10"	1'1"
13	S 28 E		43	2"	4"	4"	2"
14	S 04 E		55	1"	11"	6"	10"
15	S 33 W		25	10"	1'3"	11"	5"
16	S 84 W		54	8"	1'1"	1'1"	5"
17	N 86 W		42	2"	4"	4"	2"
18	N 05 E	1	33	*****	7"	4"	7"
Totals				10'6"	23'5"	15'4"	12'11"

Signed / G. C. Cramer
Agent
BRC

Exhibit B

RIBES STUDY PLOT

Pine Area No. 2

Peter Seay Place

October 17, 1938

Quadrangle StauntonElevation 2500 feet

Augusta County - Virginia

Estimated Timber Cut off on Study Plot in 1934 and '35					
White Pine Board Feet	Hickory Board Feet	Hemlock Board Feet	Poplar Board Feet	Locust Board Feet	Total
1,088	1,640	248	108	64	3,148

Trees Counted Left Stand on Study Plot after Cut over
in 1934 and 1935

White Pine	Maple	Butter Nut	Hickory	Hemlock	Chestnut	Total
29	14	3	2	26	2	76
Locust	Ash	Birch	Poplar	Sassafras		Total
12	1	1	1	23		38

Grand Total of Trees 114

REMARKS:

This is not a true estimate of board feet cut off of this area in 1934 and 1935, as this study plot was put in around an old camp site with approximately one to two tenths of an acre in sod. After walking over adjoining area to study plot and making an estimate of board feet cut off of an are in 1934 and 1935, I believe it will average 10,500 board feet per acre.

The above stand left on the ground is from six to eighteen years old and I think the sassafras should be omitted as it is not a commercial timber.

/s/ G. C. Cramer
Agent
BRC

REPORT
OF
STUDY PLOT
WHITE PINE BLISTER RUST

Atop the Shenandoah Mountain 2 9/10 miles up the Reddish Knob road, north of its junction with the North River road, on the left side of the road a study plot, one acre in extent, was laid out on November 22, 1938, under the supervision of State Leader Yost of Maryland by Agent G. C. Cramer and two WPA crewmen.

This area lies in the Dry River District of the George Washington National Forest in August County, Virginia. The western side of the plot touches the West Virginia - Virginia line; the Eastern side borders Reddish Knob road. The plot was marked off by stout posts driven in the corners and painted white. The area was then sub-divided into ten 1/10 acre squares marked off by string and corner posts. From east to west all posts were lettered A, B, C, or D. From south to north the posts were numbered 0, 1, 2, 3, or 4. The plot is of irregular dimensions, as two of the 1/10 acre squares were placed in one row and four of the squares in each of the two adjoining rows. This irregular shape was used as the largest number of diseased trees could be obtained thereby.

The plot is laid out on a flat, narrow ridge top and spans the width of the ridge. It lies at an elevation of approximately 3,500 feet. The forest cover is mainly of white pine and hardwoods with the white pine irregularly scattered over the plot in a 15% stand. In age the white pine varies from two to 25 years. Fourteen trees are free, five are dominate, five are intermedeiate, and six are suppressed. The undergrowth consists of various shrubs and laurel. The latter is quite thick on the row containing the two squares.

A map of the area was prepared on which the exact location of all Ribes and pine on the study plot were shown. Each pine tree was given a square number for identification purposes, such as OA5. This denotes that this is pine number 5 in the first or southwest square of the area. Each tree and canker were shown on BR-56, Data Sheet for Pine Infection Study. Copies of these sheets and the detail map have been sent to the Regional Office and the George Washington National Forest Office.

The data gathered from this plot is as follows: Ninety-nine white pines grow on the study plot, twenty-two of these were found to be infected. This is a 22.22% infection. A total of forty-six cankers were found or an average of 2.14 per tree infected and .47 per tree on the plot.

All cankers were found on branches, none on the stems. Three of the 47 cankers had killed the outer portion of the

branch on which they occurred. The oldest canker was on 1938 growth and the youngest on 1937. Three cankers were found on 1933 growth; thirteen on 1934; fourteen on 1935; sixteen on 1936 and one on 1937 growth.

There were twenty *Ribes*, *rotundifolium* and *cynosbati*, found on the study plot. They occurred in six out of the ten squares. The average was twenty *Ribes* per acre. No *Ribes* eradication has ever been done on this area or its Control Zone. Sixteen WPA man-hours were spent in laying out the plot and collecting the data pertaining thereto.

At yearly intervals hereafter the study plot will be gone over and the new infections located in an attempt to determine the rate of infections and the length of time required for the disease to kill the infected trees.

Similar study plots will be selected and data thereon reported as soon as possible after December 31, 1938,

TREATMENT OF INFECTED PINES

CANKER ELIMINATION

VIRGINIA

Infection Conditions

While infections have been found in Virginia as low as 982 feet on Ribes rotundifolium, the heaviest infected pine areas have been, with few exceptions found close to or on top of the Alleghany and Blue Ridge Mountains where air and moisture conditions are ideal for the spread of blister rust.

As a general thing most of the cankers have been found quite low on the trees examined. This is probably due to the fact that on these locations there is a considerable difference in the amount of moisture at the base and at the top of the individual trees. Also this may have been due to the fact that on the mountain tops the pine was as high or higher than the Ribes that caused the infection. In support of this fact, bad cankers were found in the tops of those trees growing at a lower level than the infected Ribes. Numerous cankers were found on trees that showed no flags although the rust was well advanced thereon.

Methods of Working:

As in the case of eradication, string is used to lay out lanes for pruning operation. Small crews, consisting of no more than four men and a foreman, are believed to be best, as close supervision is necessary for efficient elimination of the cankers. All prunings were carried to a suitable spot and burned when weather conditions permitted. All work in the Shenandoah National Park was done by CCC labor. Elsewhere WPA labor was used.

The following tables show the results of work done in 1938 and in period 1934 to 1938 inclusive.

J. G. Luce, Jr.,

1933

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THESE CHECKS ARE NOT VALID UNLESS THEY ARE COUNTERSIGNED BY THE BOARD

GEORGE WASHINGTON NATIONAL FOREST
 DRY RIVER DISTRICT
 SUMMARY OF TREATMENT OF INFECTED PINES

1938

Area No.	Location	Number Pines Exam.	Number Pines Pruned	Heights of Pines Felled				Total Pines Felled	Cankers Removed			Man Hours Used	Acres Worked	Cost	Date Worked
				Under 4 ft.	4-8'	8-12'	12'- up		Branch	Stem	Total				
B-5-F	Big River	7648	181	7	12	5	7	31	565	19	584	672	258	\$136.56	2/16-3/9-38
4-F	Reddish Knob	7039	1931	22	18	31	10	81	22167	93	22260	1414	40	\$296.80	3/14-4/16-38
TOTALS		14687	2112	29	30	36	17	112	22732	112	22844	2086	298	\$433.36	

THE FOLLOWING ARE THE
RESULTS OF THE
ANALYSIS OF THE

1000

DATE	LOCATION	DEPTH	TEMP.	WIND	WAVE	SEA	SKY	MOON	STAR
1900	1000	1000	1000	1000	1000	1000	1000	1000	1000

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SHENANDOAH NATIONAL PARK
 SUMMARY OF TREATMENT OF INFECTED PINES
 ALL YEARS - FIRST WORKING - 6½ HR. MAN-DAYS

Area Location #	No. Acres Wk'd	No. Trees Exam.	No. Trees Treated	No. Trees Removed	Number Cankers Removed			6½ Hr. Man-Days			Costs			Cost Per Acre			Year
					Br.	Stem	Total	Labor	Superv.	Total	Labor	Superv.	Total	Labor	Superv.	Total	
5 Black Rock	197	1442	96	3	151	23	174	44.0	4.0	48.0	\$66.00	\$20.80	\$86.80	\$0.33	0.11	\$0.44	1938
11 Elk Wallow Gap	40	2078	706	107	3958	126	4084	127.0	7.0	134.0	203.20	29.12	232.32	5.08	0.73	5.81	1936
16a Hawksbill-Heywood	194	14755	1795	277	9296		9296	207.0	88.0	295.0	332.40	287.42	619.82	1.71	1.48	3.19	1935
36 Skyland	50	1073	299	15	1508	30	1538	82.0	8.5	90.5	131.20	42.17	173.37	2.62	.84	3.46	1936
Total	481	19348	2896	402	14913	179	15092	460.0	107.5	567.5	732.80	379.51	1112.31	1.52	9.79	2.31	1935-38

ALL YEARS - SECOND WORKING

16a Hawksbill-Heywood	117	3266	1587	75	3727	312	4039	213.0	10.0	223.0	319.50	52.00	371.50	2.73	0.44	3.17	1938
36 Skyland	50	855	120	2	562	18	580	24.0		24.0	31.20		31.20	.62		.62	1937
Total	167	4121	1707	77	4289	330	4619	237.0	10.0	247.0	350.70	52.00	402.70	2.10	.31	2.41	1937-38
Total All Works	648	23469	4603	479	19202	509	19711	697.0	117.5	814.5	1083.50	431.51	1515.01	1.67	.67	2.34	1935-38

INFECTION CONDITIONS

INFECTION CONDITIONSMaryland

Extensive scouting was carried on in Washington, Frederick, Montgomery, Howard, Carroll, Baltimore, Harford, Cecil and the northern part of Anne Arundel and Prince George Counties. Considerable less disease was found in previous years, and the scouting was of a more thorough nature. This would indicate that weather conditions during 1938 were not particularly favorable for the long distance spread of the rust from pine to Ribes. Rust was found on one planting of cultivated gooseberries in Baltimore County a few miles north of Lutherville. No rust was found in any other location of the county. Disease was again found on a large plantation of cultivated red currants in the vicinity of Bel Air, Harford County. It is believed that probably scattered pine infections are present in Baltimore County, but to date none have been found. Rust was found on wild bushes to a comparatively light degree but generally distributed throughout Garrett and western Allegany County.

No new counties were found with blister rust infections in 1938. The list of counties where blister rust infections had been found up to December 31, 1938, includes Allegany, Baltimore, Carroll, Frederick, Garrett, Harford, Montgomery and Washington Counties.

Virginia

The accompanying table shows new infections found on Pine and Ribes in 1938. In most areas where pine infection was located the infection is very young and the number of infected trees is small.

The heaviest infections noted were as follows:

In Augusta County, on Little River west of Woodell Springs, (elevation 2650') where 19 out of 100 trees were infected.

In Augusta County, Hamseys Draft where 30 trees out of 1900 examined in the Left Fork (elevation 3300') were found infected, and where 60 out of 970 trees examined in Jerrys Run (elevation 3200') were found infected.

In Highland County, at Picnic Area at head of Locust Spring Run (elevation 3600') where 35 out of 60 pines were infected on April 28. At this same area on August 23, 57 trees out of 400 examined were found infected.

In Highland County at Wheeler Hollow (elevation 2000') where 23 out of 50 trees examined were infected.

In Rockingham County on Cow Knob on State land (elev. 3800') where 34 out of 100 trees examined were infected.

It will be noted that the heaviest infections were at the higher elevations, only one of five mentioned being below 2500'. In this connection it may be noted that white pine distribution extends as low as 500' elevation.

SUMMARY OF BLISTER RUST INFECTIONS FOUND IN VIRGINIA
IN 1938

Date	County	Location	Area	Ownership	Ribes Infections			White Pine Infections					Elevation	Discoverer	Remarks
					No. Ribes Bushes Examined	Number Bushes Found Diseased	Stage of Infection	No. of Trees Examined	Trees Found Infected	Average No. of Cankers Per tree	Age of Disease of	Stage of Infection			
1/18	Augusta	Shifflett Plantation	3-F	G.W. Nat'l For.		And Host		40	1	1	3		2050	Pierce, Luce	
1/25	Rockingham	Monogold Hollow	2					25	1	1	3	Pycnia	1900	Hopper, Cramer	
2/18	Highland	1 mile N.E. Patna	2	Guinn & Huffman Bros.				40	3	1.3	3	"	1900	Hopper	
3/8	Highland	Sinkler Hollow	7-F	G. W. Nat'l Forest				70	3	3	3 & up	"	2600	G.C. Cramer	Ribes
															Infection
															found
															here '35
															on 1/4 acre
3/24	Highland	Benson Run		" " "				30	1	1	4		3400	C. Crummett	
4/14	Rockingham	Hone Quarry Hollow		" " "				50	6	1	3	Aecial	1500	T.R. Jones	
														Ass. Foreman	4 native
															pine in-
															fectd,
															planted
															pine 2
4/28	Highland	Picnic Area, at head of Locust Spring Run		" " "				60	35	1		Aecial	3600	W.E. Roberts	
														Monongehala	
														N. F.	Plantation
															2 acres of
															inf. pine
5/4	Rockingham	Ridge between Beech Lick Knob and Crider's, Va. 502						18	6	2/3	4-7		2500	Vaughan & Hopper	
5/10	Augusta	Little River, west of Woodel Springs	13-F					100	19	2.7	3-6	Pycnia	2650	G.C. Cramer	Ribes dis.
															by Pierce
															Luce, Aug.
															12, 1937
															on 30 acre
6/9	Rockingham	2 miles S. of Cow Knob			1	1 ret.	Uridinia	10	4	1.4	3-6	"	3500	R.C. Hopper	
6/22	"	Cold Spring Hollow	506-F	G. W. N. F.				15	1	1	3	"	2300	"	
6/23	Highland	Nelson Draft	24-F	"	25	2 cyn.	"						2150	Cramer	
7/11	Augusta	Little River	1	G. C. Clindense	25	5 cyn.	Telia						1700	"	
7/12	Highland	Kyle Hollow	35-F	G. W. N. F.	25	3 rot.	Ured						1950	C. Crummett	
7/20	Highland	Wheeler Hollow	39-F	G. W. N. F.	50	13 cyn.	"	50	23	4	2-5	Aecial	2000	Cramer	7 acres
												Pycnia			inf. Pine
7/21	Rockingham	Briary Branch	11-F	G. W. N. F.	47	2 cyn.	"	30	2	2	4	Aecial	2100	Cramer	
8/9	Rockingham	Camp Raider Run	114-F	G. W. N. F.	25	4 "	Telia	50	5	2	4	Pycnia	3000	Early	1 -5 year seedling

Station	Time	Remarks	Remarks	Remarks
1	10:00	Left	10:00	10:00
2	10:15	Arrived	10:15	10:15
3	10:30	Left	10:30	10:30
4	10:45	Arrived	10:45	10:45
5	11:00	Left	11:00	11:00
6	11:15	Arrived	11:15	11:15
7	11:30	Left	11:30	11:30
8	11:45	Arrived	11:45	11:45
9	12:00	Left	12:00	12:00
10	12:15	Arrived	12:15	12:15
11	12:30	Left	12:30	12:30
12	12:45	Arrived	12:45	12:45
13	13:00	Left	13:00	13:00
14	13:15	Arrived	13:15	13:15
15	13:30	Left	13:30	13:30
16	13:45	Arrived	13:45	13:45
17	14:00	Left	14:00	14:00
18	14:15	Arrived	14:15	14:15
19	14:30	Left	14:30	14:30
20	14:45	Arrived	14:45	14:45
21	15:00	Left	15:00	15:00
22	15:15	Arrived	15:15	15:15
23	15:30	Left	15:30	15:30
24	15:45	Arrived	15:45	15:45
25	16:00	Left	16:00	16:00
26	16:15	Arrived	16:15	16:15
27	16:30	Left	16:30	16:30
28	16:45	Arrived	16:45	16:45
29	17:00	Left	17:00	17:00
30	17:15	Arrived	17:15	17:15
31	17:30	Left	17:30	17:30
32	17:45	Arrived	17:45	17:45
33	18:00	Left	18:00	18:00
34	18:15	Arrived	18:15	18:15
35	18:30	Left	18:30	18:30
36	18:45	Arrived	18:45	18:45
37	19:00	Left	19:00	19:00
38	19:15	Arrived	19:15	19:15
39	19:30	Left	19:30	19:30
40	19:45	Arrived	19:45	19:45
41	20:00	Left	20:00	20:00
42	20:15	Arrived	20:15	20:15
43	20:30	Left	20:30	20:30
44	20:45	Arrived	20:45	20:45
45	21:00	Left	21:00	21:00
46	21:15	Arrived	21:15	21:15
47	21:30	Left	21:30	21:30
48	21:45	Arrived	21:45	21:45
49	22:00	Left	22:00	22:00
50	22:15	Arrived	22:15	22:15
51	22:30	Left	22:30	22:30
52	22:45	Arrived	22:45	22:45
53	23:00	Left	23:00	23:00
54	23:15	Arrived	23:15	23:15
55	23:30	Left	23:30	23:30
56	23:45	Arrived	23:45	23:45
57	24:00	Left	24:00	24:00
58	24:15	Arrived	24:15	24:15
59	24:30	Left	24:30	24:30
60	24:45	Arrived	24:45	24:45
61	25:00	Left	25:00	25:00
62	25:15	Arrived	25:15	25:15
63	25:30	Left	25:30	25:30
64	25:45	Arrived	25:45	25:45
65	26:00	Left	26:00	26:00
66	26:15	Arrived	26:15	26:15
67	26:30	Left	26:30	26:30
68	26:45	Arrived	26:45	26:45
69	27:00	Left	27:00	27:00
70	27:15	Arrived	27:15	27:15
71	27:30	Left	27:30	27:30
72	27:45	Arrived	27:45	27:45
73	28:00	Left	28:00	28:00

SUMMARY OF BLISTER RUST FOUND IN VIRGINIA
IN 1938

Date	County	Location	Area	Ownership	Ribes Infections			White Pine Infections					Elevation	Discoverer	Remarks
					No. Ribes bushes Exam.	No. Bushes Found Diseased	Stage of Infection	No. of Trees Exam.	Trees Found Infected	Average No. Cankers Per Tree	Age of Disease	Stage of Infection			
8/11	Rockingham	Head of German River	113-F	G. W. N. F.	10	3 cyn.	Telia	25	1	1	5-7	Pycnia	2800	Early	
8/12	Rockingham	Cow Knob on State Line	115-F	"	30	25 cyn.	"	100	34	4.5		"	3800	"	1/2 acre pine infected
8/4	Rockingham	Money Ridge German River	114-F	"	10	4 cyn.	"					"	2400	"	
8/11	Rockingham	Beech Lick Hollow, German	99-F	"	20	9 "	"	15	3	2		"	2500	"	
8/23	Highland	Locust Spring Run	44-F	"	125	21 rot.	Ured	400	57	2	3-5	Aecial	3600	Cramer	Native planted pine
9/15/38	Page	Spitler Pine	37	Shenandoah N. Fk.10	3	"	Telia						3200	Early	Same area as seen 4/28/38
9/16/38	Rockingham	Dividing Ridge et al		G. W. N. F.	20	3 cyn, 3 rot.	"						3400	Luce,Early	Top Shen. Mt.
9/29/38	Greene	Point Lookout		Shenandoah N. Fk.10	2	rot.	"						3250	Luce,Withers	
9/29/38	Greene	CCC Camp 3		"	20	6 "	Ured. Telia						3000	" "	
10/6/38	Warren	Hogback Mt.		"	3000	3 "	Telia						2410	Withers	
10/8/38	Shenandoah	S.Fk. Little Paddy Run		G. W. N. F.	20	6 "	"						1800	Luce,Early	First rust found here
10/11/38	Rockbridge	Western End Goshen Pass	26	Private	200	1 "	"	60					2500	" , Shaffer	First disease found
12/12/38	Highland	West End Shaws Ridge	40-F	G. W. N. F.				75	10	1	4-5	Aecial	1900	Cramer	Ribes test, Aug. 1938
12/14/38	Rockingham	Bar Hollow	124-F	"				15	3	1	5	Pycnia	2000	Early	
12/23/38	Augusta	L.Fk. Ramsays Draft	4-F	"				1900	30	2	3	"	3300	M.Q.Miller	
12/23/38	Augusta	Jerrys Run " "	5-F	"				970	60	2	4	"	3200	"	

Date	Locality		Time	Remarks
	Section	Strata		

9/11	Rockingham	East of Green River	11-12	W. H. H. H.
9/12	Rockingham	Low Road on Stage Line	11-12	"
9/13	Rockingham	Money Ridge Green River	11-12	"
9/14	Rockingham	Beach Lake Point, Green	11-12	"
9/15	Rockingham	Local Spring	11-12	"
9/16	Rockingham	Butler Mine	11-12	"
9/17	Rockingham	Dividing Ridge of	11-12	"
9/18	Rockingham	Point Lookout	11-12	"
9/19	Rockingham	Coal Bank	11-12	"
9/20	Rockingham	North Hill	11-12	"
9/21	Rockingham	East of Green River	11-12	"
9/22	Rockingham	Western Hill Green River	11-12	"
9/23	Rockingham	East of Green River	11-12	"
9/24	Rockingham	East of Green River	11-12	"
9/25	Rockingham	East of Green River	11-12	"
9/26	Rockingham	East of Green River	11-12	"
9/27	Rockingham	East of Green River	11-12	"
9/28	Rockingham	East of Green River	11-12	"
9/29	Rockingham	East of Green River	11-12	"
9/30	Rockingham	East of Green River	11-12	"

Found prior to 1938

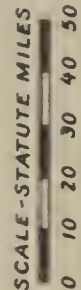
Found in 1938

Denotes rust on Pine

Denotes rust on Ribes



COUNTIES IN WHICH THE WHITE PINE BLISTER RUST (CEONARTIUM RIBICOLA) HAS BEEN FOUND DECEMBER 31, 1938



803 Grace American Building
Richmond, Virginia

SEP 5 10 20 AM '39

ANS'D
U.S. DEPARTMENT
OF AGRICULTURE

August 31, 1939

Dr. J. M. Ashcroft
Court House
Marlinton, W. Va.

Dear Dr. Ashcroft:

In my 1938 Annual Report on page 102, Infection Conditions in West Virginia, I named the counties in which blister rust had been found, stating that there were six. Unfortunately I omitted mentioning Tucker, but listed the other five. Please add Tucker after Randolph in the next to the last line.

Very truly yours,

Roy G. Pierce
Pathologist

RGF/mp

THE SECRETARY
OF THE ARMY
WASHINGTON, D.C.

1914

RECEIVED
JANUARY 10 1914

RECEIVED
JANUARY 10 1914

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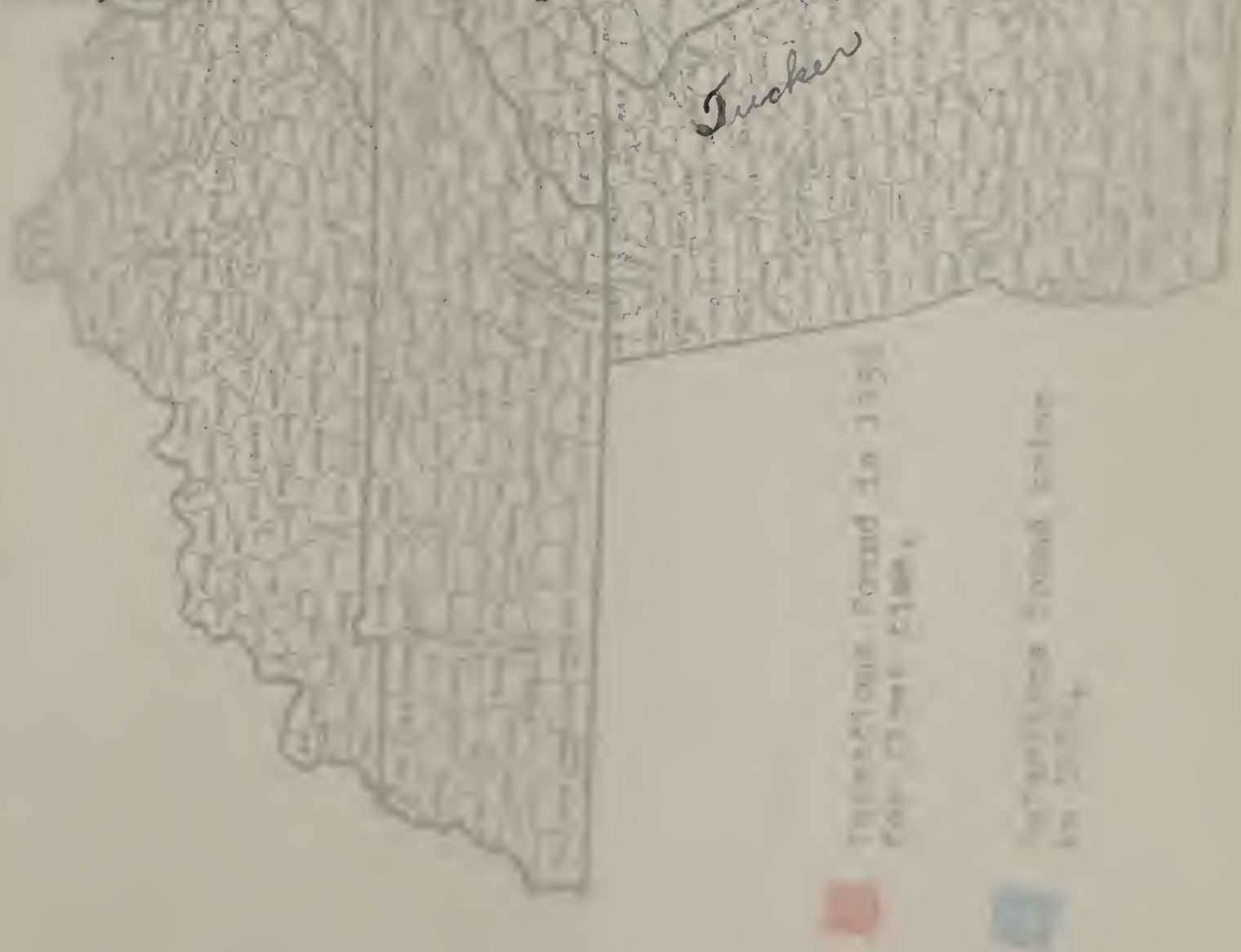
RECEIVED
JANUARY 10 1914

INFECTION CONDITIONS

West Virginia

In 1938, the rust was found in one county, Hardy from which it had not been reported previously. Two bushes, *Ribes cynosbati*, were found infected in the vicinity of Rock Oak Post Office on North River near the Hampshire-Hardy County line on September 13, 1938. Again on September 29, 1938, one bush, *Ribes cynosbati* was located about a mile north of Lost River Post Office and found to be infected by the rust. In the latter location no other infections were found although 200-250 other bushes were examined. The rust was found again this year in two counties, Pendleton and Greenbrier, from which it had previously been reported.

This brings the total number of counties in which the rust has been found to six; viz, Greenbrier, Hardy, Pendleton, Pocahontas and Randolph. In only one of them, Pendleton, have infections on pine been found.

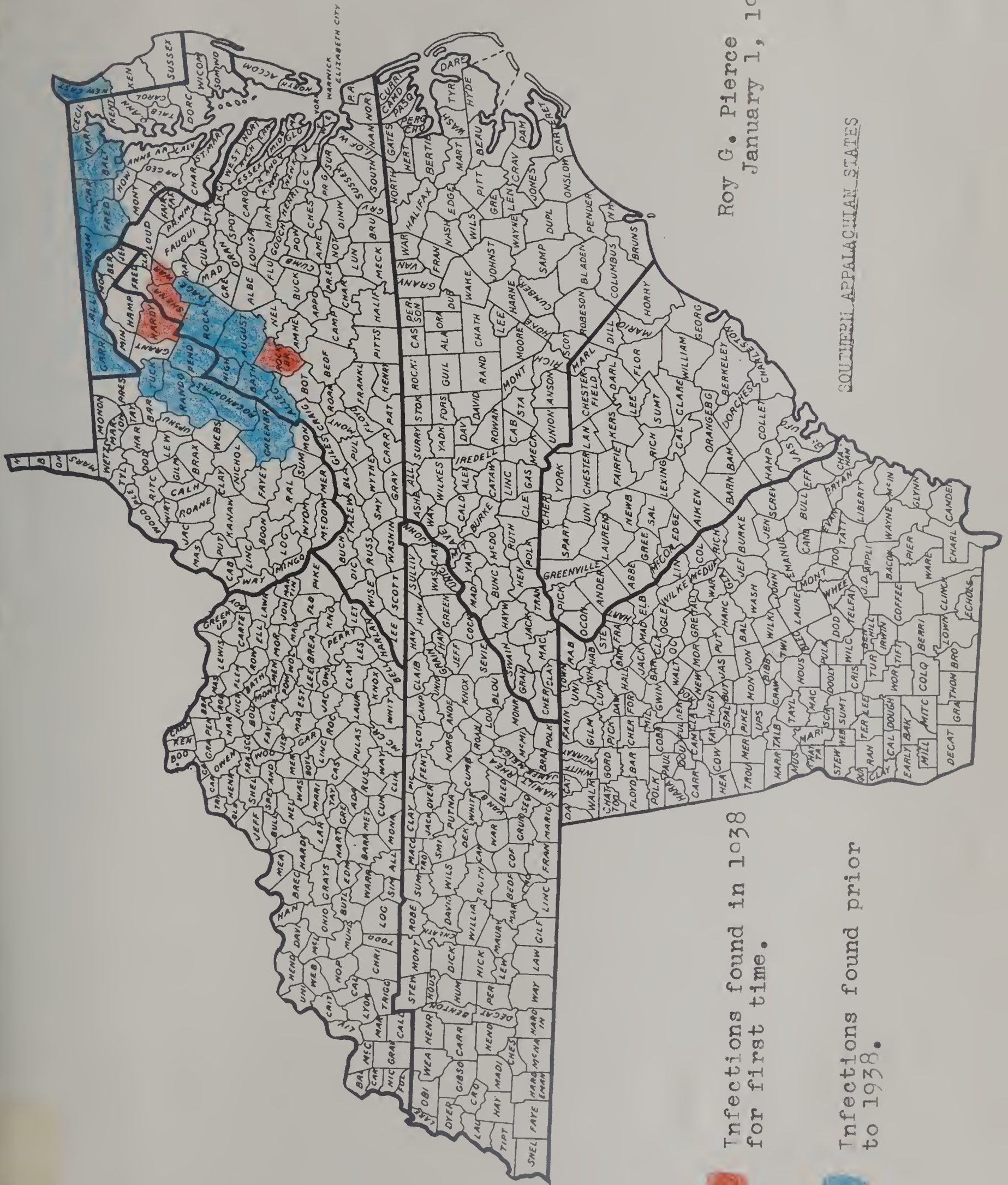


EXPOSITION 6 QUESTIONSWest Virginia

In 1938, the first was found in one county, Hardy, West Virginia. It had not been reported previously. Two others, three specimens, were found in the vicinity of North Oak River on North River near the Washington-Hardy County line on September 17, 1938. Again on September 29, 1938, one found, three specimens were found about a mile north of West River, West Virginia and found to be infected by the virus. In the latter location no other infections were found although 200-300 other snakes were examined. The first was found again this year in two counties, Pendleton and Greenbrier, from which it had previously been reported.

This brings the total number of counties in which the virus has been found to six: viz., Greenbrier, Hardy, Pendleton, Boone and Mingo. In only one of these, Pendleton, have infections in this year been found.

Greenbrier



Roy G. Pierce
January 1, 1939

SOUTHERN APPALACHIAN STATES

WHITE PINE

SUMMARY OF WHITE PINE AREAS INITIALLY PROTECTED

By Ownership of Lands in Delaware, by Acres

1918 to 1938

Year	National Lands	Municipal Lands	Private Lands	Total all Lands
1938	0	37	45	82

SUMMARY OF WHITE PINE AREAS PROTECTED FROM

BLISTER RUST INITIALLY, BY OWNERSHIP

of Lands, In acres - Georgia

1933 - 1938

	National Forests	National Park	Total Federal Lands	Private and State	Total White Pine Acres
1933	8,112	0	8,112	739	8,851
1934	6,642	0	6,642	126720	133,362
1935	125,975	0	125,976	47121	173,097
1936	73,655	0	73,655	35450	109,105
1937	50,631	0	50,631	14025	64,656
1938	75,975	0	75,975	22450	98,425
Total	340,991	0	340,991	246,505	587,496

SUMMARY OF THE FIVE YEARS FINALLY REPORTED
BY Ownership of Land in Relation to Notes
1915 to 1919

Year	National Land	Municipal Land	Private Land	Total all Land
1919	0	0	0	0

SUMMARY OF THE FIVE YEARS FINALLY REPORTED
BY Ownership of Land in Relation to Notes
1920 to 1924

1925 - 1929

Year	National Land	Municipal Land	Private Land	Total all Land
1925	0	0	0	0
1926	0	0	0	0
1927	0	0	0	0
1928	0	0	0	0
1929	0	0	0	0
1930	0	0	0	0
1931	0	0	0	0
1932	0	0	0	0
1933	0	0	0	0
1934	0	0	0	0
1935	0	0	0	0
1936	0	0	0	0
1937	0	0	0	0
1938	0	0	0	0
1939	0	0	0	0
1940	0	0	0	0
1941	0	0	0	0
1942	0	0	0	0
1943	0	0	0	0
1944	0	0	0	0
1945	0	0	0	0
1946	0	0	0	0
1947	0	0	0	0
1948	0	0	0	0
1949	0	0	0	0
1950	0	0	0	0
1951	0	0	0	0
1952	0	0	0	0
1953	0	0	0	0
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1955	0	0	0	0
1956	0	0	0	0
1957	0	0	0	0
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1961	0	0	0	0
1962	0	0	0	0
1963	0	0	0	0
1964	0	0	0	0
1965	0	0	0	0
1966	0	0	0	0
1967	0	0	0	0
1968	0	0	0	0
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1977	0	0	0	0
1978	0	0	0	0
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1980	0	0	0	0
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1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	0	0	0
1988	0	0	0	0
1989	0	0	0	0
1990	0	0	0	0
1991	0	0	0	0
1992	0	0	0	0
1993	0	0	0	0
1994	0	0	0	0
1995	0	0	0	0
1996	0	0	0	0
1997	0	0	0	0
1998	0	0	0	0
1999	0	0	0	0
2000	0	0	0	0
2001	0	0	0	0
2002	0	0	0	0
2003	0	0	0	0
2004	0	0	0	0
2005	0	0	0	0
2006	0	0	0	0
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0
2012	0	0	0	0
2013	0	0	0	0
2014	0	0	0	0
2015	0	0	0	0
2016	0	0	0	0
2017	0	0	0	0
2018	0	0	0	0
2019	0	0	0	0
2020	0	0	0	0
2021	0	0	0	0
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2024	0	0	0	0
2025	0	0	0	0
2026	0	0	0	0
2027	0	0	0	0
2028	0	0	0	0
2029	0	0	0	0
2030	0	0	0	0
2031	0	0	0	0
2032	0	0	0	0
2033	0	0	0	0
2034	0	0	0	0
2035	0	0	0	0
2036	0	0	0	0
2037	0	0	0	0
2038	0	0	0	0
2039	0	0	0	0
2040	0	0	0	0
2041	0	0	0	0
2042	0	0	0	0
2043	0	0	0	0
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2045	0	0	0	0
2046	0	0	0	0
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2048	0	0	0	0
2049	0	0	0	0
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2072	0	0	0	0
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2078	0	0	0	0
2079	0	0	0	0
2080	0	0	0	0
2081	0	0	0	0
2082	0	0	0	0
2083	0	0	0	0
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2085	0	0	0	0
2086	0	0	0	0
2087	0	0	0	0
2088	0	0	0	0
2089	0	0	0	0
2090	0	0	0	0
2091	0	0	0	0
2092	0	0	0	0
2093	0	0	0	0
2094	0	0	0	0
2095	0	0	0	0
2096	0	0	0	0
2097	0	0	0	0
2098	0	0	0	0
2099	0	0	0	0
2100	0	0	0	0

SUMMARY OF WHITE PINE AREAS

Protected from Blister Rust Initially by Ownership
of lands, in acres

Kentucky

Year	National Forests	Total Federal Lands	Total State Municipal, and Private Lands
1934	^A 0	0	26,372
1937	-	-	-
1938	6.		6

A. Some of the lands protected in 1934 were later purchased by Forest Service - there is no data however on exact amount.

REMARKS ON THE PROGRESS
 OF THE WORK DURING THE YEAR
 OF 1934, IN THE

REMARKS

Year	Actual Progress	Total Budgeted Work	Total Actual Work
1934	0	0	26,372
1935	-	-	-
1936	5	-	6

A. Some of the work projected in 1934 was
 left uncompleted by the end of the year - 1934
 is no data however on exact amount.

SUMMARY OF WHITE PINE AREAS PROTECTED FROM ALLYED WET, INITIALLY, by Ownership
(Areas in Acres)

Maryland

Year	Federal Resettlement Adm.	State Lands	Unlopal lands	Private Lands	Total non Federal	Total Federal State Municipal	Grand total All Lands Good Pine Averaging 50 trees and over Per Acre	Scat- tered Pine All Ave. less than 50 per acre
1932		1,296	3530	550	5370	4820	537	537
1933		180	-	1750	658	180	175	65
1934	1800 553	7,1460 5,1105	-	24,0036 15,2163	311490 203268	7,3260 51955	31,329	20,411 51,740
1935	-	3000 1008	-	5,7650 1,5608	60650 46608	3000 1008	6,005	4,600 10,725
1936	700 203	3300	-	-	3300	4000 203	400	20 12
1937	1750 150	630	5000 3008	910 2,005	6540 5608	7380 3153	829	595 1,424
1938		340	24	516	780	704	403	780
	545	13,536	1,177	50,603	6532	15,258	39,738	26,128
								65,066

G = Good pine averaging 50 trees and over per acre
S = Scattered pine averaging under 50 trees per acre

Statement of Assets and Liabilities of the Corporation as of December 31, 1914

Assets

Fixed Assets	Current Assets	Liabilities
Land	Accounts Receivable	Accounts Payable
Buildings	Notes Receivable	Notes Payable
Equipment	Prepaid Expenses	Other Liabilities
Investments	Other Assets	

Fixed Assets

Land

Buildings

Equipment

Investments

Other Assets

Accounts Payable

Notes Payable

Other Liabilities

Total

Balance Sheet

Assets

Liabilities

Equity

Capital

Reserves

Other Equity

Total

Assets

Liabilities

Equity

Capital

Reserves

This statement is prepared in accordance with the provisions of the Corporation Act, 1908, and is subject to the audit of the Comptroller General of the United States.

SUMMARY OF WHITE PINE AREAS PROTECTED INITIALLY FROM
BLISTER RUST BY OWNERSHIP AND YEARS, NORTH CAROLINA

FEDERAL LANDS						
Year	National Forests	National Parks	Resettlement Administration	Indian Reservations	Total	
1933		14,876	2,010	0	16,886	
1934		8,801	0	0	8,801	
1935		0	0	0	0	
1936	(2)	0	0	0	0	
1937	21,361	39,941	5,820	0	45,761	
	18,580	5,255				
1938	8,328	12,403	0	5	12,408	
	4,075					
Total		76,021	7,830	5	83,856	
NON-FEDERAL LANDS						
Year	State	County	Municipal	Private	Total	Grand Total All Lands
1933	0	0	0	0	0	16,886
1934	0	0	0	158,520	158,520	167,321
1935	0	0	0	261,174	261,174	261,174
1936	0	0	0	67,156	67,156	67,156
1937	0	0	0	125,976	125,976	171,737
				56,967		
				69,009		
1938	2	12	2	68,066	68,082	80,490
				42,478		
				25,588		
Total	2	12	2	680,892	680,908	764,764

(1) This includes State, County and Municipal as well as Private Lands.

(2) Where 2 figures are used before a total the upper figures represents "good pine" averaging over 50 trees per acre and the lower figure represents "scattered pine" averaging less than 50 trees per acre.

Summary of White Pine Areas Protected Initially
From Blister Rust from 1918 to 1938, in acres

Acres White Pine South Carolina Initially				Subsequent Acres Added
Y E A R	National Forests	Total Federal Lands	State and Private Lands	Total All White Pine
1933	425	425	463	888
1934	1,375	1,375	4,027	5,402
1935	0	0	7,562	7,562
1938	275	275	1,010	1,285
Total				15,137

During 1937 and 1938 a total of 1,010 acres of white pine have been added. Of this total 275 acres have been protected.

Summary of White Pine Areas Protected Initially
From Blister Beet from 1918 to 1938, in Acres

South Carolina

Year	Regional Forests	Total Federal Land	State and Private Land	Total All White Pine
1938	432	432	432	864
1934	1,078	1,078	6,000	7,078
1932	0	0	7,000	7,000
1930	878	878	3,010	3,888
Total	2,078	2,078	13,000	18,156

**Summary of White Pine Initially Protected in
Tennessee 1933 to 1938**

Year	National Forests	Acres White Pine Protected Initially	Total Federal Timber	White Pine State	Cumulative Acreage White Pine	Total White Pine Acreage
1933		5,932			5,932	
1934		28,639			34,571	
1935		6,157			40,728	
1936		12,808			53,536	
1937		141,848			195,384	
1938		130,495			325,879	
Total		325,879				

During 1937 and 1938 a total of 316,473 acres of white pine have been mapped. Of this total 272,543 acres have been protected.

NUMBER OF ACRES WITH INTERESTS
 AS LISTED FIRST INITIALLY BY OWNER
 TYPE OF LAND, IN 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020

Year	National Forests	National Park	Federal Lands	Private and State	Total
1900	1,619	2,712	1,361	863	2,530
1910	1,626	2,303	2,192	18,119	21,240
1920	2,129	2,142	6,614	18,124	29,009
1930	2,129	2,142	6,614	18,124	29,009
1940	2,129	2,142	6,614	18,124	29,009
1950	2,129	2,142	6,614	18,124	29,009
1960	2,129	2,142	6,614	18,124	29,009
1970	2,129	2,142	6,614	18,124	29,009
1980	2,129	2,142	6,614	18,124	29,009
1990	2,129	2,142	6,614	18,124	29,009
2000	2,129	2,142	6,614	18,124	29,009
2010	2,129	2,142	6,614	18,124	29,009
2020	2,129	2,142	6,614	18,124	29,009
Total	21,017	2,032	10,200	125,244	158,593

Summary of White Pine Areas Protected Initially

1929 to 1938 Inclusive

By Ownership of Lands

West Virginia

Year Worked	National Forest	Total Federal Lands	State	Private	Total Federal Lands	Grand Total All Lands
1932	30	30		29	29	59
1933	175	175		1,018	1,018	1,193
1934	212	212	15	5,313	5,328	5,540
1935	928	928		11,254	11,254	12,182
1936	8,597	8,597	1,296	21,260	22,556	31,153
1937	16,627	16,627	2,086	45,408	47,494	64,121
1938	2,606	2,606	1,164	52,217	53,381	55,987
Total	29,175	29,175	4,561	136,499	140,760	170,235

Summary of White Pine Area Tracts Initially
 1929 to 1938 Inclusive
 by Ownership of Land
 Year Ended

Year Ended	National Forest	Total Federal Land	State	Private Individual Land	Total Federal All Land
1929	30	30		30	30
1930	172	172		1,018	1,190
1931	212	212	12	2,312	2,524
1932	238	238		11,324	11,562
1933	8,227	8,227	1,226	21,200	21,426
1934	16,627	16,627	2,082	42,408	44,411
1935	2,606	2,606	1,104	25,212	26,922
1936	29,172	29,172	1,202	156,030	157,232

STATES of TRUCKS in SOUTHERN APPALACHIAN STATES - JULY 1, 1939

Models	Delaware	Georgia	Maryland	North Carolina	Tennessee	Virginia	W. Virginia	Grand Total
On Hand Jan. 1, 1939								
T-12 Dodge 1/2 ton pick-ups	2	4	1	8	9	8	6	38
M-57 Chev. Delivery-1/2 ton			1		1	1	4	7
T-36.)								
37 or) Chev. Stake Body-1 1/2 ton		3	1	4	2	1	3	14
38)								
K57 or 38 Chev. Pick-ups		1		1		4	1	7
Total	2	8	3	13	12	14	14	66

Transferred to Virginia from Delaware February 4, 1939

1(D1/2)

1(D1/2)

Transferred to Tennessee From North Carolina Chevrolet 1 1/2 ton. June 10, 1939

1(C1 1/2)

1(C1 1/2)

Transferred to Virginia from West Virginia Chevrolet Stake Body-1 1/2 ton, June 9, 1939

1(Chev. 1 1/2)

1(Chev. 1 1/2)

Balance in State July 1, 1939	1	8	3	12	13	16	13	66
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STATUS of PASSENGER AUTOMOBILES JANUARY 1, 1939

Chevrolet Sedan						1(Rich)		
Ford Coupe						1		2
Total		1						

SUMMARY OF TRUCK ACCIDENTS IN SOUTHERN APPALACHIAN STATES FOR CALENDAR YEAR 1938.

State	Date	Number of Accidents	Location	Probably Fault of:	How Settled
<u>Georgia</u>	October 7	1	Near Chatsworth	Other driver	Repairs paid for by driver of other truck
<u>North Carolina</u>	December 2	1	Bakersville	Other truck	Not settled yet
	April 4	1	Asheville	Other driver	Repairs paid for by driver
<u>Tennessee</u>	August 26	1	Erwin	Driver of Government truck	Case closed, no claim put in by driver of other car.
	July 20	1	Near Elizabethton	Other truck	Solicitor of Department has rendered a bill to the Carter County Highway Department for payment.
<u>Virginia</u>	February 26	1	Sugar Grove	Government truck	Damage to other truck was so slight, consisting only of a slight dent in front fender that no claim was presented by the driver of the other truck.
	February 19	1	Marion	" "	Claim of \$23.09 acknowledged by the Department of Agriculture and a request made to the Director of Budgets that a bill be presented to Congress for payment of claim
	May 3	1	Wythe	Other driver	No damage to Government car. No claim made by the driver of the car.
<u>West Virginia</u>	April 9	1	Brandywine	Other driver	Case was considered closed by the Bureau, since there was little hope of collection of the cost of damages to the Government car.

In 1937 there were only six accidents in contrast to nine in 1938. In the case of the accidents the Government trucks seemed at fault in three cases and the driver of the other truck in five cases. One case remains unsettled, the case in Bakersville, N. C. December 2nd. The case in West Virginia was closed by the Bureau since there seemed no chance of collection of damages from the owner of the other car. As to settlement, no claims were made in three cases against the Government. The driver of the other car was billed by the Department of Agriculture in the case of Carter County, Tennessee Highway Department. The Government acknowledged a claim in one case and the Director of Budgets has been requested to present the bill of \$23.09 to Congress for payment.

Year	Month	Day	Event
1947	October	7	First meeting of the committee
1947	November	2	Second meeting of the committee
1947	December	1	Third meeting of the committee
1947	January	15	Fourth meeting of the committee
1947	February	28	Fifth meeting of the committee
1947	March	10	Sixth meeting of the committee
1947	April	2	Seventh meeting of the committee

In 1947, there were only two meetings of the committee. The first meeting was held on October 7, 1947, and the second meeting was held on November 2, 1947. The committee was composed of the following members: [illegible names]. The committee was organized to study the problem of [illegible subject]. The committee held a total of seven meetings in 1947. The first meeting was held on October 7, 1947, and the last meeting was held on April 2, 1948. The committee was organized to study the problem of [illegible subject]. The committee held a total of seven meetings in 1947. The first meeting was held on October 7, 1947, and the last meeting was held on April 2, 1948.

OPERATING COSTS FOR TRUCKS
SOUTHERN APPALACHIAN STATES-CALENDAR YEAR 1938

GEORGIA	USDA A2-146	62-012	42-824	42-817	42-897	44-417	44-422	44-421
	Engine No. K57-39097	T12-25392	T12-25461	T12-25671	T12-26369	T37-38247	T37-50443	T38-53934
Total cost gasoline, oil and grease	138.41	216.94	65.07	188.80	77.18	133.96	12.98	149.12
All other costs	55.93	175.18	33.93	115.80	79.59	52.97	.50	73.14
Total cost	194.34	392.12	99.00	304.60	156.77	186.93	13.48	222.26
Average cost per month for gasoline, oil and grease	11.53	18.08	5.42	15.73	6.43	11.16	1.08	12.43
Average cost per month for other operating costs	4.66	14.60	2.83	9.65	6.63	4.41	.04	6.10
Average total cost per month	16.20	32.68	8.25	25.38	13.06	15.58	1.12	18.52
Mileage for period	7502	13698	5627	14651	5263	4232	491	5970
Mileage for preceding years	35543	14283	15493	14288	41828	39420	38139	39621
Total mileage at end of period	43045	27981	21120	28939	47091	43652	38630	45591
Average cost per mile	.038	.035	.057	.048	.034	.023	.036	.027
		Rec'd 12/22/37 Gypsy Moth	Rec'd 12/22/37 Gypsy Moth	Rec'd 12/22/37 Gypsy Moth	Rec'd 12/22/37 Gypsy Moth			

STATEMENT OF TRUCKS & AUTOS IN USE
IN GEORGIA

STATE

GEORGIA	License Number	Serial Number	Engine Number	Capacity	Make & Kind	Year Model	Date Purchased	Speedometer Reading 12/31/38	Mileage in 1938	Cost per mile	Total c cost for Calendar year
	A-2146	SFB111892	K57-30097	$\frac{1}{2}$ ton	Chevrolet pick up	1936	11/29/35	43045	7502	.038	\$194.34
	42-817	8072253	T12-25871	"	Dodge	"	1935 12/22/37	28939	14651	.048	304.60
	42-824	8072250	T12-25461	"	"	"	1935 "	21120	5627	.057	99.00
	42-897	8072487	T12-26369	"	"	"	1935 "	47091	5263	.034	156.77
	44-417	6643	T37-38247	$1\frac{1}{2}$ ton	Chevrolet Stake	1933	7/10/36	43652	4232	.023	186.93
	44-421	9007	T38-53934	"	"	"	1933 "	45591	5970	.027	222.26
	44-422	6390	T37-50443	"	"	"	1933 12/11/38	38630	491	.036	13.48
	62-012	8072386	T12-25392	$\frac{1}{2}$ ton	Dodge Pick-up	1935	12/22/37	27981	13698	.035	392.12
	A3-043	18	T14-72793		Ford Coupe	1935	11/18/38	22283	643	.06	40.70

STATIONARY ENGINE

IN COMPLIANCE WITH

STATE

GEORGIA

License
Number

Serial
Number

Station
Number
Capacity
Type

4-5146	80751002	1251-24002	1/2 ton	Chrysler
12-817	8075253	115-25817	"	Dodge
12-821	8075250	115-25817	"	"
12-827	8075107	115-25820	"	"
11-117	6613	137-38217	1 1/2 ton	Chrysler
11-157	9007	138-25387	"	"
11-155	6320	137-20173	"	"
63-015	8075386	115-25386	1/2 ton	Dodge
43-013	18	117-25386	1/2 ton	Dodge

OPERATING COSTS FOR TRUCKS
SOUTHERN APPALACHIAN STATES - CALENDAR YEAR 1938

MARYLAND & DELAWARE	USDA 42-864	31-614 43-017	31-640 43-018	43-008	31-989
Engine No.	T12-24472	T12-25318	T12-25413	T37-38260	M57-28086
Total cost gasoline, oil and grease	96.54	95.43	104.92	139.10	122.39
All other costs	79.58	35.61	46.59	120.25	62.65
Total cost	176.12	131.04	151.51	259.35	185.04
Average cost per month for gasoline, oil and grease	8.04	7.95	8.75	11.58	10.18
Average cost per month for other operating costs	6.63	2.97	3.88	10.02	5.22
Average total cost per month	14.67	10.92	12.63	21.60	15.40
Mileage for period	11261	11210	10670	6371	17569
Mileage for preceding years	25572	14743	14581	40932	24853
Total mileage at end of period	36833	25953	25251	47303	42422
Average cost per mile	.015	.012	.014	.047	.0105

DEPARTMENT OF THE ARMY
ENGINE NO. 115-21412
15-017
15-018

DEPARTMENT OF THE ARMY	ENGINE NO. 115-21412	15-017	15-018
Average cost per mile	0.10	0.10	0.10
Total mileage at end of period	3883	2222	1222
Mileage for preceding year	2222	1111	1111
Average for period	1121	1110	1110
Per month	14.01	10.98	10.98
Average total cost	0.63	0.63	0.63
Operating costs	0.63	0.63	0.63
Month for repair	0.63	0.63	0.63
Average cost per month for gasoline, oil and grease	0.07	0.07	0.07
Total cost	346.12	131.04	131.04
All other costs	70.50	32.01	32.01
Oil and grease	96.54	32.42	32.42
Total cost including oil and grease	442.66	163.46	163.46

STATEMENT OF TRUCKS & AUTOS IN USE
IN MARYLAND

State

Maryland	License Number	Serial Number	Engine Number	Capacity	Make, Kind	Year Model	Date Purchased	Speedometer Reading 12/31/38	Mileage '38	Cost Per Mile	Total Cost For Calendar Year
	* 31-614	8072368	T12-25318	½ ton	Dodge Pick-up	1935	12/27/37	25953	11210	.012	\$131.04
	* 31-640	8072326	T12-25413	"	" "	1935	"	25251	10670	.014	151.51
	31-989	2FC116249	M57-28086	"	Chevrolet Sedan	1936	2/15/38	42422	17569	.0105	185.04
	43-008	6707	T37-38260	1½ ton	Chevrolet Stake	1933	5/15/36	47303	6371	.047	259.35

* 31-614 changed to 43-017

31-640 changed to 43-018

STATEMENT OF WORKS

IN WASHINGTON

State	Agency	Project	Start Date	End Date
Alabama	Alabama Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Alaska	Alaska Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Arizona	Arizona Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Arkansas	Arkansas Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
California	California Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Colorado	Colorado Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Connecticut	Connecticut Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Delaware	Delaware Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Florida	Florida Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Georgia	Georgia Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Hawaii	Hawaii Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Idaho	Idaho Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Illinois	Illinois Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Indiana	Indiana Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Iowa	Iowa Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Kansas	Kansas Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Kentucky	Kentucky Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Louisiana	Louisiana Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Maine	Maine Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Maryland	Maryland Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Massachusetts	Massachusetts Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Michigan	Michigan Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Minnesota	Minnesota Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Mississippi	Mississippi Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Missouri	Missouri Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Montana	Montana Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Nebraska	Nebraska Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Nevada	Nevada Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
New Hampshire	New Hampshire Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
New Jersey	New Jersey Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
New Mexico	New Mexico Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
New York	New York Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
North Carolina	North Carolina Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
North Dakota	North Dakota Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Ohio	Ohio Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Oklahoma	Oklahoma Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Oregon	Oregon Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Pennsylvania	Pennsylvania Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Rhode Island	Rhode Island Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
South Carolina	South Carolina Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
South Dakota	South Dakota Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Tennessee	Tennessee Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Texas	Texas Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Utah	Utah Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Vermont	Vermont Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Virginia	Virginia Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Washington	Washington Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
West Virginia	West Virginia Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Wisconsin	Wisconsin Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02
Wyoming	Wyoming Department of Transportation	Construction of new highway bridge	12-1-01	12-31-02

71-010 changed to 71-017
71-010 changed to 71-018

SOUTHERN APPALACHIAN STATES
OPERATING COSTS FOR TRUCKS FOR CALENDAR YEAR
1938

USDA	60-143	42-882 A4-799	31-575	62-046	42-889	62-008	42-809 A-2-974	62-041	42-806 A-2578	62-045
<u>NORTH CAROLINA</u>										
Classification	K57-42052	T12-24144	T12-24180	T12-25043	T12-25846	T12-25854	T12-25986	T12-26063	T12-26243	T12-26504
Total cost of gas oil and grease	153.28	93.92	117.09	134.87	140.73	197.25	91.93	79.22	176.99	72.46
All other costs	78.73	22.89	42.33	44.13	18.52	88.65	60.37	27.96	49.33	27.76
Total Cost	232.01	116.81	159.42	179.00	159.25	285.90	152.30	107.18	226.32	100.22
Average cost per month for gas and oil	12.77	7.92	9.76	11.24	11.73	16.44	7.66	6.60	14.75	6.04
Average cost per month for other operating costs	6.56	1.91	3.53	3.68	1.54	7.39	5.03	2.33	4.11	2.31
Average total cost per month	19.33	9.74	13.33	14.92	13.27	23.83	12.69	8.93	18.86	8.35
Mileage for period	9191	5374	8382	12143	8405	13847	6348	5292	12090	3895
Mileage for preceeding years	23197	22801	29080	7651	14990	22317	9713	13261	12533	13252
Total Mileage at end of period	32388	28175	37462	19794	23395	36164	16061	18553	24623	17147
Average cost per mile	.02	.02	.02	.01	.02	.02	.02	.02	.02	.02

COURT OF THE
 DISTRICT OF COLUMBIA
 1911

Classification	1907-1908	1908-1909	1909-1910	1910-1911
North Carolina	60-108	61-730	62-885	63-947

Total cost of raw oil and grease	157.28	167.32	167.32	167.32
All other costs	78.73	78.88	78.88	78.88
Total cost	236.01	246.20	246.20	246.20
Average cost per month for raw oil	12.77	13.93	13.93	13.93
Average cost per month for other operating costs	6.56	6.56	6.56	6.56
Average total cost per month	19.33	20.49	20.49	20.49
Mileage for period	919	924	924	924
Mileage for preceding year	8197	8201	8201	8201
Total mileage at end of period	9116	9125	9125	9125
Average cost per mile	20.	22.	22.	22.

OPERATING COST FOR TRUCKS
SOUTHERN APPALACHIAN STATES*CALENDAR YEAR 1938

NORTH CAROLINA	USDA	44-420	44-423	44-419	44-422	44-418
Classification		T37-19185	T37-19338	T37-37187	T37-50443	T37-64138
cost						
Total gas, oil and grease		37.94	37.51	44.11	63.20	79.52
All other costs		31.08	41.35	16.40	18.51	85.47
Total Costs		69.02	78.86	60.51	81.71	164.99
Average cost per month for gas & oil		3.17	3.12	3.68	5.27	6.63
Average cost per mo. for other operating costs		2.67	3.45	1.37	1.54	7.12
Average total cost per month		5.75	6.57	5.04	6.81	13.75
Mileage for period		928	948	2360	3094	3156
Mileage for preceeding years		45816	51372	42130	35072	37740
Total mileage at end of period		46744	52320	44190	38166	40896
Average cost per mile		.07	.08	.02	.02	.05

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STATEMENT OF TRUCKS & AUTOS IN USE
IN NORTH CAROLINA

STATE

NORTH CAROLINA	License Number	Serial Number	Engine Number	Capacity	Kind & Make	Yr. Model	Date Purchased	Speedometer Reading 12/31/38	Mileage In '38	Cost Per Mile	Total Cost For Cal. Year
	A2-578	8072247	T12-26243	$\frac{1}{2}$ ton	Dodge Pick- up	1935	12/28/37	24623	12090	.02	226.32
	A2-579	8072324	T12-24180	"	" "	1935	2/21/38	37462	8382	.02	159.42
	A2-974	8072243	T12-25986	"	" "	1935	"	16061	6348	.02	152.30
	A2-975	8072392	T12-25854	"	" "	1935	12/28/37	36164	13847	.02	285.90
	* 42-882	8072460	T12-24144	"	" "	1935	2/21/38	28175	5374	.02	116.81
	A3-995	8072265	T12-25846	"	" "	1935	12/28/37	23395	8405	.02	159.25
	A3-996	7025	T37-64138	1 $\frac{1}{2}$ ton	Chevrolet Stake	1933	11/16/37	40896	3156	.05	164.99
	44-419	6535	T37-37187	"	" "	1933	"	44490	2360	.02	60.51
	A3-994	6153	T37-19185	"	" "	1933	"	46744	928	.07	69.02
	44-423	6193	T37-19338	"	" "	1933	"	52320	948	.08	78.86
	60-143	8FD012777	K57-42052	$\frac{1}{2}$ ton	" Pick-up		12/28/35	32388	9191	.02	232.01
	62-041	8072387	T12-26063	"	Dodge "	1935	2/21/38	18553	5292	.02	107.18
	62-045	8072430	T12-26504	"	" "	1935	"	17147	3895	.02	100.22

* 42-882 changed to A4-799

Department	Date	Page	Project No.	Project Name	Project No.	Page
Total cost for all work done	10.10	10.10	10.10	10.10	10.10	10.10
Total cost for all work done	10.10	10.10	10.10	10.10	10.10	10.10
Average cost per unit for material and labor	10.10	10.10	10.10	10.10	10.10	10.10
Average cost per unit for other material and labor	10.10	10.10	10.10	10.10	10.10	10.10
Average cost per unit for other material and labor	10.10	10.10	10.10	10.10	10.10	10.10
Average cost per unit for other material and labor	10.10	10.10	10.10	10.10	10.10	10.10

OPERATING COST FOR TRUCKS
SOUTHERN APPALACHIAN STATES * CALENDAR YEAR 1938

Tennessee	USDA 42-863	62-044	56-633	31-219	56-634	31-193	31-238	31-199	31-198	43-006	56-632
	Engine T12-25805	T12-26168	T36-85041	T36-32145	T36-85382	T36-97763	T37-192954	T37-19367	T37-19475	T38-55385	T896915
Total cost gasoline oil and grease	193.20	151.58	122.53	19.11	72.58	172.64	40.11	52.93	6.96	7.44	164.12
All other costs	111.35	112.44	165.82	29.71	10.13	170.09	92.86	17.65	.50	22.56	81.08
Total costs	304.55	264.02	288.35	48.82	82.71	342.73	132.97	70.58	7.46	30.00	245.20
Average cost per month for gasoline oil and grease	16.10	12.63	10.21	1.59	6.05	14.39	3.34	4.41	.58	.62	13.68
Average cost per month for other operating costs	9.28	9.37	13.82	2.47	.85	14.18	7.74	1.47	.04	1.88	8.76
Average total cost per month	25.38	22.00	24.03	4.07	6.89	28.56	11.08	5.88	.62	2.50	20.43
Mileage for period	12893	9698	5885	1630	3290	6384	1856	1911	624	480	5662
Mileage for preceeding years	16413	13739	42942	61562	56874	51063	12421	55068	69351	31687	6974
Total mileage at end of period	29306	23437	48827	63192	60164	57447	14277	56979	69975	32167	12636
Average cost per mile	.02	.02	.04	.03	.02	.05	.07	.07	.01	.06	.02

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY

Tennessee				Alabama				Georgia			
1924-25				1925-26				1926-27			
Total cost production				Total cost production				Total cost production			
All other costs				All other costs				All other costs			
Total costs				Total costs				Total costs			
Average cost per bushel for production				Average cost per bushel for production				Average cost per bushel for production			
Average cost per bushel for other operating costs				Average cost per bushel for other operating costs				Average cost per bushel for other operating costs			
Average total cost per bushel				Average total cost per bushel				Average total cost per bushel			
Mileage for period				Mileage for period				Mileage for period			
Mileage for preceding years				Mileage for preceding years				Mileage for preceding years			
Total mileage of and of period				Total mileage of and of period				Total mileage of and of period			
Average cost per mile				Average cost per mile				Average cost per mile			
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STATEMENT OF TRUCKS & AUTOS IN USE
IN TENNESSEE

STATE

TENNESSEE

License Number	Serial Number	Engine Number	Capacity	Kind & Make	Yr. Model	Date Purchased	Speedometer Reading 12/31/38	Mileage in '38	Cost per mile	Total Cost for Cal. year
31-193	90D06-5663	T36-97763	1½ ton	Chev. Stake	1933	6/17/36	57447	6384	.05	342.73
31-597	8072384	T12-24558	½ ton	Dodge Pick-up	1935	2/24/38	44965	9412	.02	251.46
31-840	8072462	T12-22733	½ ton	" "		1/4/38	42391	14173	.02	333.61
42-830	8072498	T12-24546	" "	" "	1935	2/24/38	26373	5029	.02	127.97
42-863	8072377	T12-25805	" "	" "		1/6/38	29306	12893	.02	304.55
42-868	8072426	T12-24768	" "	" "	1935	2/24/38	23690	7400	.02	140.24
56-633	90D06-5591	T36-85041	1½ ton	Chev.	1933	7/31/37	48827	5885	.04	288.35
62-009	8072294	T12-24490	½ ton	Dodge Pick-up		1/4/38	26652	10546	.02	284.74
62-011	8072312	T12-24165	½ ton	" "		1/4/38	20490	8561	.02	179.79
62-044	8072432	T12-26168	" "	" "	1935	2/24/38	23437	9698	.02	264.02
62-047	8072366	T12-25435	" "	" "	1935	2/24/38	29715	7238	.02	153.07
31-995	2FC116598	M57-45617		Chev. DeLuxe Delivery	1936	2/17/38	39672	5585	.02	159.61

Case Number	Case Name	Case Description
21-005	21-005	21-005
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OPERATING COSTS FOR TRUCKS
SOUTHERN APPALACHIAN STATES - CALENDAR YEAR 1938

Virginia	USDA	53-124	53-123	53-121	38-292	64-958	43-007	31-644	31-695	62-023	31-607
	Engine	K37-16853	K37-39047	K37-72435	K57-41849	M57-45638	T37-19268	T12-22400	T12-24610	T12-24697	T12-25119
Total cost gasoline, oil and grease		111.33	143.28	59.85	176.38	119.33	130.42	62.92	122.47	187.76	179.07
All other costs		68.73	121.75	33.45	65.80	54.29	69.73	8.93	30.50	82.92	84.48
Total cost		180.06	265.03	93.30	242.18	173.62	200.15	71.85	152.97	270.68	263.55
Average cost per month for gasoline & oil		9.28	11.94	4.55	14.69	9.94	10.87	5.24	10.21	15.65	14.92
Average cost per month for other operating costs		5.73	10.15	2.79	5.48	4.52	5.81	.74	2.54	6.91	7.04
Average total cost per month		15.00	22.08	7.78	20.18	14.47	16.68	5.99	12.75	22.56	21.96
Mileage for period		7746	9455	4862	12811	12049	5032	4877	10281	11917	13690
Mileage for preceding years		54241	25590	46004	25985	27375	40642	13303	30969	16765	25502
Total mileage at end of period		61987	35045	50866	38796	39424	45674	18180	41250	28682	39192
Average cost per mile		.02	.02	.02	.02	.01	.03	.01	.01	.02	.02

Vehicle	2011-12	2012-13	2013-14	2014-15	2015-16
2011-12	100.00	100.00	100.00	100.00	100.00
2012-13	100.00	100.00	100.00	100.00	100.00
2013-14	100.00	100.00	100.00	100.00	100.00
2014-15	100.00	100.00	100.00	100.00	100.00
2015-16	100.00	100.00	100.00	100.00	100.00
Total	500.00	500.00	500.00	500.00	500.00
Average cost per mile	100.00	100.00	100.00	100.00	100.00
Total mileage at end of period	5000	5000	5000	5000	5000
Mileage for previous years	1000	1000	1000	1000	1000
Mileage for current year	4000	4000	4000	4000	4000
Average cost per mile for current year	100.00	100.00	100.00	100.00	100.00
Average cost per mile for other reporting periods	100.00	100.00	100.00	100.00	100.00
Average cost per mile for all periods	100.00	100.00	100.00	100.00	100.00

OPERATING COSTS FOR TRUCKS
SOUTHERN APPALACHIAN STATES - CALENDAR YEAR 1938

Virginia	USDA	64-959	42-899	62-050	42-831	53-122
	Engine	T12-26187	T12-26496	T12-26499	T12-25423	K38-48060
Total cost gasoline, oil and grease		223.59	109.40	203.66	279.51	49.83
All other costs		63.85	36.35	83.44	70.92	10.38
Total cost		287.44	145.75	287.10	350.43	60.21
Average cost per month for gasoline and oil		18.63	9.12	16.97	23.29	4.15
Average cost per month for other operating costs		5.32	3.03	6.97	5.91	.87
Average total cost per month		23.88	12.15	23.09	29.20	5.02
Mileage for period		12766	7842	10913	14921	2632
Mileage for preceding years		29843	13759	43986	18923	49849
Total mileage at end of period		42609	21601	54899	33844	52481
Average cost per mile		.02	.01	.02	.02	.02

STATEMENT OF TRUCKS & AUTOS IN USE
IN VIRGINIA

STATE	License Number	Serial Number	Engine Number	Capacity	Make & Kind	Year Model	Date Purchased	Speedometer Reading 12/31/38	Mileage In '38	Cost Per Mile	Total Cost For Cal. Year
VIRGINIA											
	A3-039	8072295	T12-26499	$\frac{1}{2}$ ton	Dodge Pick-up	1935	2/21/38	54899	10913	.02	287.10
	A3-042	8072404	T12-2 5119	"	" "	"	1/5/38	39192	13690	.02	263.55
	31-644	8072492	T12-22400	"	" "	"	2/21/38	18180	4877	.01	71.85
	31-695	8072320	T12-24610	"	" "	"	"	41250	10281	.01	152.97
	38-292	14FB111783	K57-41849	"	Chevrolet Pick-up	1936	12/10/35	38796	12811	.02	242.18
	42-864	8072429	T12-24472	"	Dodge "	1935	12/27/37	36833	11261	.01	176.12
	42-899	8072389	T12-26496	"	" "	"	1/5/38	21601	7842	.01	145.75
	43-007	6730	T37-19268	1 $\frac{1}{2}$ ton	Chevrolet Stake		5/15/36	45674	5032	.03	200.15
	53-121	31113	K37-72435		" Pick-up	1933	5/24/37	50866	4862	.02	93.30
	53-123	28559	K37-39047		" "	"	"	35045	9455	.02	265.03
	53-12 4	27137	K37-16853		" "	"	"	61987	7746	.02	180.06
	62-023	8072424	T12-24697	"	Dodge "	1935	2/21/38	28682	11917	.02	270.68
	64-958	2FC116592	M57-45638	"	Chev. DeLuxe	1936	2/17/38	39424	12049	.01	173.62
	64-959	8072305	T12-26187	"	Dodge Pick-up	1935	1/5/38	42609	12766	.02	287.44

OPERATING COSTS FOR TRUCKS
SOUTHERN APPALACHIAN STATES - CALENDAR YEAR 1938

-6

WEST VIRGINIA	USDA 31-990	31-995	31-963	31-950	31-970	31-951	62-042	42-898	42-831	42-894
Engine No.	M57-28144	M57-45617	M57-45638	M57-45710	M57-45721	M57-52877	T12-24622	T12-24492	T12-25423	T12-25465
Total cost gasoline, oil and grease	96.37	15.13	9.93	95.28	68.38	97.99	78.60	87.72	4.04	121.57
All other costs	16.63	2.75	2.00	18.14	15.44	16.86	34.62	87.79	19.25	50.03
Total cost	113.00	17.88	11.93	113.42	83.82	114.85	113.22	175.51	23.29	171.60
Average cost per month for gasoline, oil and grease	8.03	1.26	.83	7.94	5.70	8.17	6.55	7.31	.34	10.13
Average cost per month for other operating costs	1.39	.23	.17	1.51	1.29	1.41	2.89	7.32	1.60	4.17
Average total cost per month	8.58	1.49	.99	9.45	6.99	9.57	9.44	14.63	1.94	14.30
Mileage for period	8396	847	591	8232	2719	7538	4852	5431	143	8022
Mileage for preceding years	33242	796	26784	26784	28295	22340	19507	13994	33891	17774
Mileage at end of period	41638	1643	27375	35016	31014	29878	24359	19425	34034	25796
Average cost per mile	.01	.02	.02	.01	.03	.01	.02	.03	.15	.01

Item	1954-55	1955-56	1956-57	1957-58
Average cost per mile	10.00	10.00	10.00	10.00
Mileage at end of period	10000	10000	10000	10000
Mileage for previous years	10000	10000	10000	10000
Mileage for period	10000	10000	10000	10000
Average cost per month	10.00	10.00	10.00	10.00
Average cost per month for other operating costs	10.00	10.00	10.00	10.00
Expense for gasoline, oil and grease	10.00	10.00	10.00	10.00
Total cost	10.00	10.00	10.00	10.00
All other costs	10.00	10.00	10.00	10.00
Oil and grease	10.00	10.00	10.00	10.00
Total cost gasoline	10.00	10.00	10.00	10.00

OPERATING COST FOR TRUCKS
SOUTHERN APPALACHIAN STATES - CALENDAR YEAR 1938

WEST VIRGINIA	USDA	31-837	62-010	43-009	44-416	43-006
	Engine	T12-25885	T12-26758	T37-39311	T37-33902	T38-55385
Total cost gasoline, oil and grease		78.02	149.15	147.24	158.19	78.14
All other costs		44.65	111.79	119.11	159.06	46.77
Total cost		142.67	260.94	266.35	317.25	124.91
Average cost per month for gasoline oil and grease		6.50	12.43	12.27	13.18	6.51
Average cost per month for other operating costs		3.72	9.32	9.93	13.26	3.90
Average total cost per month		11.89	21.75	22.20	26.44	10.41
Mileage for period		4775	8429	6593	4194	3700
Mileage for preceding years		18990	19100	50152	33307	32215
Mileage at end of period		23765	27529	56745	37501	35915
Average cost per mile		.02	.03	.04	.07	.03

[illegible]

STATEMENT OF TRUCKS & AUTOS IN USE
IN WEST VIRGINIA

STATE	License Number	Serial Number	Engine Number	Capacity	Make & Kind	Year Model	Date Purchased	Speedometer Reading 12/31/38	Mileage In '38	Cost Per Mile	Total Cost For Cal. Year
WEST VIRGINIA											
	31-837	8072448	T12-25885	$\frac{1}{2}$ ton	Dodge Pick-up	1935	1/10/38	23765	4775	.02	142.67
	31-950	2FC116663	M57-45710		Chev. DeLuxe	1936	2/17/38	35016	8232	.01	113.42
	31-951	2FC116793	M57-52877		" "	"	"	29878	7538	.01	114.85
	31-970	2FC116661	M57-45721		Chev. Sedan	"	"	31014	2719	.03	83.82
	31-990	2FC116302	M57-28144		Chev. DeLuxe	"	"	41638	8396	.01	113.00
	42-831	8072248	T12-25423	$\frac{1}{2}$ ton	Dodge Pick-up	1935	1/5/38	34034	143	.15	23.29
	42-894	8072379	T12-25465	"	" "	"	1/10/38	25796	8022	.02	171.60
	42-898	8072365	T12-24492	"	" "	"	"	19425	5431	.03	175.51
	43-006	6710	T38-5538	5 $1\frac{1}{2}$ ton	Chevrolet Stake	1933	7/24/37	35915	3700	.03	124.91
	43-009	6731	T37-39311	"	" "	"	5/5/36	56745	6593	.04	266.35
	44-416	6515	T37-33902	"	" "	"	7/2/36	37501	4194	.07	317.25
	53-122	36652	K38-48060		" Pick-up	"	5/24/37	52481	2632	.02	60.21
	62-010	80724061	T12-26758	$\frac{1}{2}$ ton	Dodge Pick-up	1935	1/5/38	27529	8429	.03	260.94
	62-042	8072501	T12-24622	"	" "	"	2/24/38	24359	4852	.02	113.22

STATEMENT OF TRUCKS IN USE
IN WEST VIRGINIA

STATE	License Number	Serial Number	Truck Number	Truck Description
WEST VIRGINIA	31-357	8076448	112-25835	Chrysler Sedan
	31-353	8071662	112-25835	Chrysler Sedan
	31-352	8071662	112-25835	Chrysler Sedan
	31-340	8071662	112-25835	Chrysler Sedan
	31-330	8071662	112-25835	Chrysler Sedan
	15-821	8076448	112-25835	Chrysler Sedan
	15-801	8075212	112-25835	Chrysler Sedan
	15-802	8075212	112-25835	Chrysler Sedan
	15-006	8075212	112-25835	Chrysler Sedan
	15-003	8075212	112-25835	Chrysler Sedan
	15-116	8075212	112-25835	Chrysler Sedan
	15-122	8075212	112-25835	Chrysler Sedan
	15-110	8075212	112-25835	Chrysler Sedan
	15-012	8075212	112-25835	Chrysler Sedan

INFORMATIONAL ACTIVITIES

A summary of information services carried on in the calendar year 1938 is given in the following table.

	Delaware	Ga.	Md.	North Car.	Tenn	Va.	West Va.	Totals
Items Published			3	25	12	8	2	50
Meetings		2	12	11	12	55	3	95
Attendance at Meetings		325	782	517	309	4270	295	6,498
Demonstrations Placed		4	4	4	17	3	1	33
Initial Interviews	206	959	625	1,179	3979	152	789	7,898
Follow-up calls	42	132	187	280	302	12	4	959
Individuals Instructed	5	38	377	2,195	835	926	82	4,458
No. Publications Distributed	65	6754	1811	931	2220	4685	1,726	18,238
No. Posters Placed	8	143	10	111	97	129	107	605

INFORMATIONAL ACTIVITIES

Calendar Year 1938

Delaware

Little educational work was carried on in Delaware by Mr. Bernard Pufahl, since his chief work was to learn conditions in the State and conduct a pine survey. However, he carried on 206 initial interviews, made 42 follow-up calls, instructed five individuals in eradication, distributed 65 publications and placed eight posters. This is a very creditable showing for the State, which only began work in August 1938.

INTERNATIONAL ACTIVITIES

A summary of information received on 14 July 1953 is given in the following table.

Source	Date	No. of Persons	No. of Countries	No. of Organizations	No. of Individuals	No. of Groups	No. of Meetings	No. of Publications
1	1953	17	17	17	17	17	17	17
2	1953	17	17	17	17	17	17	17
3	1953	17	17	17	17	17	17	17
4	1953	17	17	17	17	17	17	17
5	1953	17	17	17	17	17	17	17
6	1953	17	17	17	17	17	17	17
7	1953	17	17	17	17	17	17	17
8	1953	17	17	17	17	17	17	17
9	1953	17	17	17	17	17	17	17
10	1953	17	17	17	17	17	17	17
11	1953	17	17	17	17	17	17	17
12	1953	17	17	17	17	17	17	17
13	1953	17	17	17	17	17	17	17
14	1953	17	17	17	17	17	17	17
15	1953	17	17	17	17	17	17	17
16	1953	17	17	17	17	17	17	17
17	1953	17	17	17	17	17	17	17
18	1953	17	17	17	17	17	17	17
19	1953	17	17	17	17	17	17	17
20	1953	17	17	17	17	17	17	17

INTERNATIONAL ACTIVITIES

Calendar Year 1953

Summary

The summary of international work was carried on in 1953 by the Bureau of the League of Nations, which has been working in the field of international law, and the League of Nations, which has been working in the field of international law. The League of Nations is a very important organization, and it is very important to have a summary of its work. The League of Nations is a very important organization, and it is very important to have a summary of its work. The League of Nations is a very important organization, and it is very important to have a summary of its work.

Georgia

Besides carrying on the regular educational work carried on in all States and recorded in the Monthly Progress Reports, and shown in accompanying talbe, informational talks were made before nine schools and teachers, and five Demonstrations were made with film strip and projector. The attendance at the film showings was 95. Two demonstrations or exhibits were placed at County Fairs in Fannin and Gilmer Counties with an attendance respectively of 2500 and 3500. First Prize was given to the exhibit at the Gilmer County Fair.

Maryland

During the year an exhibit on white pine blister rust and its control was placed in the show window of the Oakland Hardware Company at Oakland, Garrett County. This exhibit was maintained for one week and attracted a considerable amount of attention. Three semi-permanent Roadside Exhibits explaining the life cycle of the disease and exhibiting specimens of the pine and Ribes together with a brief resume of the control work and blister rust situation in the State were made. One of these exhibits was placed at each of the following locations: Falls Area, in Garrett County; New Germany Recreation Area, in Garrett County; and Washington Monument State Park, Washington County.

In each case the State Officer in charge of the area was given a supply of literature usually Miscellaneous Publication No. 22, which he distributed. In a few cases during Sunday these exhibits were attended by a blister rust agent. No estimate could be made of the number of persons who observed these but it is believed to have been several thousand.

During the year 12 meetings were held on the subject of white pine blister rust and its control; eight of these meetings were High School Classes; two were District Forest Ward Conferences; one a Parent Teachers Association; and one the Epworth League of the Methodist Church in Cumberland. The High Schools and Parent Teachers Association addressed were in Baltimore and Carroll Counties. The Forest Warden's Conference covered the following counties; Cecil, Kent, Queen Anne, Talbot and Caroline Counties. One field trip was conducted jointly with the Technical Service at Camp S-53, for the 4-H Clubs of Allegany County. On this trip the Long Pond Rod and Gun Club Study Plots were observed and in general the white pine and Ribes in the vicinity of Fifteen Mile Creek in Allegany County. Newspaper items were of a local nature and dealt with the general characteristics and distribution of the disease and its control.

Georgia

Session early in the regular educational work period on in all states and recorded in the Monthly Progress Reports, and shown in accompanying tables, informational tables were made before nine schools and teachers, and five demonstration were made with this strip and projector. The attendance at the film showings was 93. Two demonstration or exhibits were placed at County fairs in Lenoir and Oglethorpe Counties with an attendance respectively of 2500 and 3500. Film prize was given to the exhibit at the Oglethorpe County Fair.

Virginia

During the year an exhibit on white pine blister rust and the control was placed in the show window of the Oglethorpe Railway Company at Oglethorpe, Georgia. This exhibit was maintained for one week and attracted a considerable amount of attention. Three semi-permanent roadside exhibits explaining the life cycle of the disease and exhibiting specimens of the pine and ribbon together with a brief review of the control work and blister rust situation in the State were made. One of these exhibits was placed at each of the following locations: Ellis Area, in Garrett County; New Germany Recreation Area, in Garrett County; and Washington Monument State Park, Washington County.

In each case the State Officer in charge of the area was given a supply of literature usually Miscellaneous Publications No. 22, which he distributed. In a few cases during Sunday these exhibits were attended by a blister rust agent. No estimate could be made of the number of persons who observed them but it is believed to have been several thousand.

During the year 12 meetings were held on the subject of white pine blister rust and the control; eight of these meetings were High School Classes; two were District Forest Ward Conferences; one a Forest Teachers Association; and one the Forest Leaders of the Methodist Church in Cumberland. The High Schools and Forest Teachers Association addressed were in Belknap and Carroll Counties. The Forest Ward's Conference covered the following counties: Cecil, Kent, Queen Anne's, Talbot and Caroline Counties. One field trip was made jointly with the Technical Service at Camp 8-25, for the 4-H Clubs of Allegany County. On this trip the Forest Ward and the High School were observed and in general the white pine and ribbon in the vicinity of Wilson Hill Creek in Allegany County. Newspaper items were of local nature and dealt with the general characteristics and distribution of the disease and its control.

North Carolina

In addition to the informational activities listed on the following page, a blister rust control poster exhibit was placed at several public places during the year.

The exhibit was shown by Mr. Coulter to about 200 people at a Soil Conservation Service CCC Camp in Forest City, North Carolina, and to about 500 people at a County Fair in Spruce Pine, North Carolina.

Mr. Whitman placed the exhibit at one or more places in Macon County; and he placed the exhibit on display for three days at the Cherokee County Fair in Murphy, North Carolina. The exhibit was also placed at the North Carolina State Test Farm in Swannanoa, in August.

asked for 1902

In addition to the international activities listed on the following page, a driver with control number 00001 was assigned as several public places during the year.

The exhibit was shown by Mr. Collier to about 500 people at a Hall Convention held at the 500 Camp in Forest City, North Carolina, and to about 500 people at a County Fair in Greene Pine, North Carolina.

Mr. Nathan placed the exhibit at one or more places in
Room 200; and he placed the exhibit on display for three
days at the American County Fair in Murphy, North Carolina.
The exhibit was also placed at the North Carolina State Fair
in Greensboro, in 1904.

INFORMATIONAL ACTIVITIES IN NORTH CAROLINA - 1938 By Counties

County	Number Meetings Held	Attendance at Meetings	Items Published	Demonstrations Placed	Initial Inter-views	Follow up Calls	Individuals Instructed	No. Pubs. Dist'd	No. Posters Placed
Buncombe			3	1	1	3	5	6	2
Burke			3		173	16	156	147	26
Caldwell					54	25	5	36	1
Cherokee	1	150	3	1	30	1	29	220	5
Clay					5		4	11	2
Graham	3	123	2		22		22	86	6
Haywood			1		7	9	54	46	9
Jackson	1	16	4		101	7	79	46	
Macon	3	139	5		134	110	210	54	6
McDowell	1	4			148	12	150	12	8
Mitchell	1	15	3	1	215	30	1,034	112	23
Polk	1	70	1		7		7	43	4
Swain							41	50	1
Transylvania							1	29	4
Yancey			1		282	67	398	79	14
Totals	11	517	25	4	1,179	280	2,195	931	111

БЕЛ - АНТИНАЦИОНАЛНИ ИСТИННИ ИСТИНАСКИ
РЕЗУЛТАТИ

2017-2018

Year	Month	Day	Time	Location	Species	Count	Notes
1950	Jan	1	10:00	Forest	Deer	1	Spotted
1950	Jan	2	11:00	Forest	Deer	2	Spotted
1950	Jan	3	12:00	Forest	Deer	1	Spotted
1950	Jan	4	13:00	Forest	Deer	1	Spotted
1950	Jan	5	14:00	Forest	Deer	1	Spotted
1950	Jan	6	15:00	Forest	Deer	1	Spotted
1950	Jan	7	16:00	Forest	Deer	1	Spotted
1950	Jan	8	17:00	Forest	Deer	1	Spotted
1950	Jan	9	18:00	Forest	Deer	1	Spotted
1950	Jan	10	19:00	Forest	Deer	1	Spotted
1950	Jan	11	20:00	Forest	Deer	1	Spotted
1950	Jan	12	21:00	Forest	Deer	1	Spotted
1950	Jan	13	22:00	Forest	Deer	1	Spotted
1950	Jan	14	23:00	Forest	Deer	1	Spotted
1950	Jan	15	24:00	Forest	Deer	1	Spotted
1950	Jan	16	25:00	Forest	Deer	1	Spotted
1950	Jan	17	26:00	Forest	Deer	1	Spotted
1950	Jan	18	27:00	Forest	Deer	1	Spotted
1950	Jan	19	28:00	Forest	Deer	1	Spotted
1950	Jan	20	29:00	Forest	Deer	1	Spotted
1950	Jan	21	30:00	Forest	Deer	1	Spotted
1950	Jan	22	31:00	Forest	Deer	1	Spotted

Tennessee

It was not possible to enter a white pine blister rust control exhibit at the Tennessee Valley Fair in 1938 because of the large agricultural exhibit building burning and could not be replaced in time to be used during the fair. If space can be secure in 1939, plans will be made to enter an exhibit this year.

Each agent has distributed a large number of pamphlets and informational material during 1938. The total number distributed for the year was 2,220. A total of 97 posters were placed in public buildings and in other places where they would be effective in educating the public.

Twelve meetings were held in Tennessee during 1938, with an attendance of 309 people. Lantern slides and projectors were used to show educational materials and films to the people. A total of 12 items were published furnishing educational material to the public. Seventeen demonstrations were placed in counties worked during 1938. There were 3,979 initial interviews, 302 follow-up calls, and 835 individuals instructed.

U. S. D. A. Miscellaneous Publication No. 22 is the best publication used in informing the public about white pine blister rust. The clear, concise manner in which the work is described in this publication makes it ideal for distribution to the public.

Virginia

Most of the lectures or talks given at schools or CCC Camps, garden clubs and meetings of business men in the State, have been made by Mr. Douglas D. Withers, who is handling this specialized work on our project.

He reports that a great deal of interest has been manifested in our educational program and on several occasions he has been requested to repeat at a greater length his addresses at various schools.

Ribes mounts of infected leaves and white pine twigs and good specimens of trunk cankers, mounted on walnut bases with cards having data as to places found, etc., have been placed in a display case at the State Museum at Richmond and in the office of the State Forester in Charlottesville.

Exhibits at two fairs, are in Harrisonburg and another at Broadway, both in Rockingham County were staged.

Exhibits

It was not possible to enter a white pine blister rust control exhibit at the Tennessee Valley Fair in 1938 because of the large agricultural exhibit building burning and would not be replaced in time to be used during the fair. If space can be secured in 1939, plans will be made to enter an exhibit this year.

Each agent has distributed a large number of pamphlets and informational material during 1938. The total number distributed for the year was 6,280. A total of 27 posters were placed in public buildings and in other places where they would be effective in educating the public.

Twelve meetings were held in Tennessee during 1938, with an attendance of 309 people. Lantern slides and projectors were used to show educational materials and films to the people. A total of 12 films were provided containing educational material to the public. Seventeen demonstrations were given in counties worked during 1938. There were 3,079 initial interviews, 302 follow-up calls, and 835 individuals instructed.

U. S. E. A. Miscellaneous Publication No. 82 is the best publication used in informing the public about white pine blister rust. The agent, creative manner in which the work is conducted in this publication makes it ideal for distribution to the public.

Visitors

Most of the lectures or talks given at schools or CCC Camps, Garden clubs and meetings of business men in the State, have been made by Mr. Douglas H. Stephens, who is handling this specialized work on our project.

It reports that a great deal of interest has been manifested in our educational program and on several occasions we have been requested to repeat at a greater length the address at various schools.

Kind donors of infected leaves and white pine saws and good specimens of trunk cankers, mounted on white paper with certain labeling data as to place found, etc., have been placed in a display case at the State Museum at Jackson and in the office of the State Forester in Nashville.

Exhibits at two fairs, one in Chattanooga and another at Knoxville, both in East Tennessee County were staged.

Painted canker specimens received from Washington Office and painted by Miss Bruce Bayles, were sent to Mr. Luce in 1938. He had walnut bases made for them and sent them to Mr. F. C. Pederson, State Forester and to the State Museum at Richmond. In this latter connection Mr. Luce received the following letter.

COMMONWEALTH OF VIRGINIA

Mineral, Timber and Historical Museum

Richmond

June 8, 1938

Mr. J. G. Luce, Jr.,
State Leader, Blister Rust Control
Madison, Virginia

Dear Mr. Luce:

This will acknowledge receipt of your letter of June 7 and shipment of display materials relative to blister rust.

We sincerely appreciate this donation, which will be placed on exhibit immediately, and we wish to thank you for your interest in our Department.

Again thanking you for your contribution, I am

Sincerely yours

J. G. Blount
Custodian, State Museum

West Virginia

In addition to the regular type of information activities such as personal contacts, new items, and distribution of publications and display of posters, addresses were made to two High School audiences in Raleigh County, and before the Alleghany Section of the Society of American Foresters which convened at White Sulphur Springs, West Virginia in August 1938.

Received certain specimens from the Washington Office and dated by Miss Grace Lyle, were sent to Mr. Lane in 1938. He has since made for them and sent them to Mr. J. C. Peterson, State Forester and to the State Museum at Richmond. In this letter, Mr. Lane received the following letter.

COMMONWEALTH OF VIRGINIA

Ministry, Labor and Historical Museum

Richmond

June 8, 1938

Mr. J. C. Peterson,
State Forester, Office of State Control
Richmond, Virginia

Dear Mr. Peterson:

This will acknowledge receipt of your letter of June 7 and shipment of display materials relative to Division 10.

We are very appreciative of this donation, which will be placed on exhibit immediately, and we wish to thank you for your interest in our Department.

Again thanking you for your contribution, I am

Sincerely yours

J. G. Brown
Governor, State Museum

West Virginia

In addition to the regular type of information supplied such as personal notices, new items, and distribution of publications and display of exhibits, addresses were made in the High School building in Raleigh County, and before the Library Section of the Society of Western Writers which convened at White Sulphur Springs, West Virginia in August 1938.

Report of

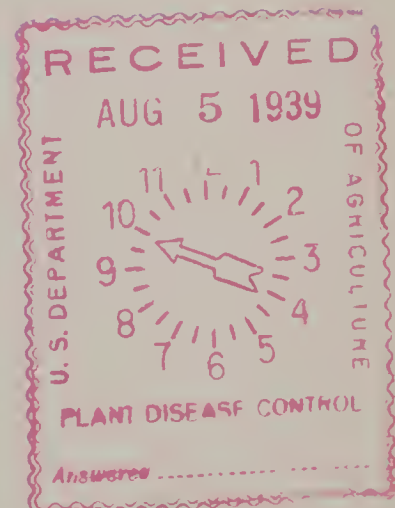
ELITE PEST CONTROL IN THE NORTH CENTRAL REGION, 1943

by

Henry H. Feltner
Senior Pathologist

and

Laurel M. Nelson
Assistant Forester



ALIVET UNIT CONTROL, NORTH CENTRAL SECTION, 1950

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Status of Blister Rust Control Program on December 31, 1948

North Central Region

Blister Rust Conditions

Infection on white pine or Ribes has been found in varying degrees of intensity in practically all of the important white pine growing counties of the three Lake States. It has reached the damage stage at several localities, notably central and northeastern Minnesota, central and western Wisconsin, central portion of Upper Michigan and in several localities in Lower Michigan.

Weather conditions during the summer of 1948 were favorable to the spread of the rust. Particularly in the southern and central portions of the Region several counties were added to the list of those in which rust on Ribes, chiefly *R. nigrum*, had been found. These included five counties in northern Illinois; two in northern Indiana; five in northeastern Iowa; 13 in southern Michigan; four in southeastern Minnesota; 1, in northwestern Ohio; and 13 in southern Wisconsin.

White Pine

The acreage of white pine and white pine planting sites in the Region listed for protection amounts to 1,219,750 acres. The total control area from which Ribes should be removed to protect this acreage is 1,025,366 acres. Favorable weather conditions the last few years, coupled with more effective fire suppression practices, are resulting in increased natural establishment of white pine. There continues to be a large amount of white pine planting in all of the states. For these reasons the acreage listed for protection is increasing.

While the ownership of white pine is in a constant state of flux due to tax delinquency, public acquisition, and other factors, the figures as to ownership of white pine, native and planted, in 1948 are believed to be fairly indicative as shown following:

Federal Forest Service - - - -	170,936 acres or 14.0%
Federal Indian Service - - - -	53,450 acres or 4.5
Other Federal Lands - - - - -	8,165 acres or 0.7
State - - - - -	248,665 acres or 20.2
County, Municipal - - - - -	14,385 acres or 1.2
Private - - - - -	630,713 acres or 51.7
Total - - - - -	1,197,199 acres or 100.0

A fairly close estimate of the Regional total of Rhipsalis worth protection as of December 31, 1939 is as follows:

Native white pine - - - - -	1,109,416 acres
Planted white pine - - - - -	45,783 acres
Approved white pine planting sites - - - - -	60,551 acres
Total - - - - -	1,215,750 acres

Pre-eradication surveys have been completed around nearly all of the good native stands. Activities along these lines in 1940 were concerned with inaccessible areas, chiefly in northeastern Minnesota, and with current plantings and planting sites.

Status of Control

	Acres W.P. & W.P.F.S.	Acres Total
Total worth protecting	1,215,750	4,823,466
Initially worked	702,378	2,686,633
Given second working	71,963	295,756
Percent given initial working	57.0%	5.9%

* - second working

During 1938, 15,624,190 Ribes bushes were removed from 106,518 acres to initially protect 106,208 acres of white pine. This work cost 65,128 man-days, or \$204,752.12. The average acre worked initially required 0.16 man-day, costing \$2.90 in destroying 38.5 Ribes bushes. On the average, 239.9 bushes were pulled per man-day.

In second eradication during 1938, 2,932,647 bushes were pulled on 67,851 acres to protect 21,276 acres of pine. This cost 18,001 man-days, or \$59,762.22. In addition 113,584 bushes were removed in third eradication from 2,066 acres to protect 789 acres of white pine, using 324 man-days costing \$2,361.47.

Thus, in 1938, a total of 1,75,457 acres was worked, using 83,585 man-days. This was an increase of 52.1% in acreage, and 13.1% in man-days over 1937.

Checks After Eradication

The customary 2% systematic check in which the number and size of live stems of Ribes bushes remaining after eradication are recorded on a measured acreage basis was continued in 1948. Ribes counts on 5,107 acres, or 3,379 miles, of strips to check work done on 232,940 acres showed 9.03 bushes and 12.83 F.L.S. on lowland sites, 3.16 bushes and 3.22 F.L.S. on upland areas, 0.65 bushes and 1.05 F.L.S. on brown rock, or an average of 2.02 bushes and 3.99 F.L.S. per acreage acre remaining after eradication. This is well below the maximum of 24 F.L.S. per acre allowable.

Of the 222,915 acres checked, 90 1/2 showed less than 50% and 88.34 less than 25 P.D.B. per acre after eradication.

Nursery Sanitation

During 1938 nursery sanitation was performed either as initial work, or as an annual check, around 43 nurseries growing white pine containing 2,085 acres protected. A total of 97,146 81/2" of which 574 were cultivated bushes, was removed from 14,515 acres. The ownership classification of the 43 nurseries was:

	Nurseries
U. S. Forest Service	9
U. S. Indian Service	1
U. S. Soil Conservation Service	5
State	12
Private	16
Total	43

Due to modifications of Federal Quarantine 63, the responsibility for issuing certificates permitting nurseries to ship white pine was shifted from the U. S. Division of Domestic Plant Quarantine to the states. Permission to ship white pine was granted to each of the 43 nurseries by the state authority concerned. These 43 nurseries are all of the nurseries in the Region at the present time growing white pine for reforestation purposes or in sufficient quantities to justify nursery sanitation costs.

The number of white pines growing within the protected nurseries was as follows:

State	Nurseries	White Pines
Illinois	2	19,600
Iowa	9	357,000
Michigan	8	17,996,900
Minnesota	10	12,116,115
Ohio	5	5,006,790
Wisconsin	8	19,600,620
Total	43	27,208,025

Cultivated Plant Current Elimination

During 1938 initial cultivated plant current eradication was carried on in Iowa, Michigan and Ohio. The work is virtually completed in the last pine counties. In 1938 this project was confined to eliminating certain counties and in other counties counties where it was

destroyed 2,674 locations containing 12,639 cultivated black current bushes were destroyed in initial cultivated black current work in the Region.

In addition, check work in 14 counties in Michigan, Minnesota and Wisconsin resulted in finding and destroying 3,226 bushes in 632 locations.

An analysis of the 2,585 bushes in 573 locations found and destroyed on check in Michigan and Wisconsin showed some interesting facts. These locations were classified into four groups as shown below:

	Locations	Percent
Missed originally	394	70.6
Seedlings	1	0.2
Sprouts	82	14.7
Planted since original work	81	14.5
Total	558	100.0

Fortunately, judging from these and other studies, S. nigres does not regenerate readily from seed.

If the total of the locations missed originally and those found originally is considered as a base, the percent found originally is 34.6%.

To December 31, 1938, 262,580 cultivated black current bushes found in 70,886 locations in the Region had been destroyed.

The white pine growing portions of the Region are now in a fairly sanitary condition with respect to the absence of cultivated black current bushes. The check work in Michigan and Wisconsin is approaching completion. There remains a limited amount of work to do in those portions where these bushes are removed for a mile from scattered white pine stands, and in completing check work in Minnesota and in those counties in other states where such work is advisable.

Recommendations for Future Work

Except for new white pine plantations, and necessary areas the pre-sanitation survey in the Region is practically completed. Future sanitation has reached the point where an annual or semi-annual inspection for Siles is all that is required. Cultivated black current eradication has been nearly completed. Approximately 85% of the white pine has been given initial protection.

If Siles is still available to be available we should have every effort to complete initial protection of the remaining 15% of unprotected pine. Protection of newly established white pine plantations should keep up with their establishment.

As time goes on our problem becomes increasingly one of maintaining protection established by initial workings. To intelligently perform this phase of our work requires that we systematically examine, by means of a post check, all areas scheduled for reworking. By this method we will concentrate our rework where most needed, and will be able to classify many stands as sufficiently Ribes-free as to be placed on maintenance. The ultimate objective of our work is to place on maintenance all of our valuable white pine stands, thus insuring them against loss from blister rust.

Status of Blister Rust Cont. of Program on December 31, 1938

Illinois

Blister Rust Conditions

During 1938, 34 locations of rust on Ribes were found in four counties previously not known to be infected. All of these new locations were in the northern counties of the state and practically all rust found was on Ribes nigrum. To date rust has been found on Ribes in 10 counties. No rust has been discovered on white pine.

White Pine

There are now estimated to be 2,968 acres of white pine and white pine planting sites in Illinois worth protection. A portion of this acreage is represented by pine located in parks and chiefly valued for aesthetic purposes. However, the largest amount of pine is in plantations where it is used for shelter and windbreak. Several large estates are using white pine for reforestation.

Status of Local Control

Acres W.P. and W.P.P.S. worth protecting	2,968
Acres W.P. and W.P.P.S. given initial working	2,777
Acres W.P. and W.P.P.S. given second working	1,237

Approximately 95% of the white pine has received initial protection and 35% a second working.

Nursery Sanitation

Work was done around seven nurseries in which 19,600 white pines are growing. This required working 1,945 acres from which 5,880 Ribes were removed. A total of 48 man-days was used. Supervision was furnished by the State leader and not charged to nursery sanitation. All nurseries have now had their Ribes population reduced to such a state that an annual or biennial checking will suffice to maintain sanitary conditions.

Recommendations for Future Work

Continue control work with emphasis placed on providing initial protection to all remaining pine worth protection. Provide for second or subsequent workings when necessary toward placing all stands on a maintenance basis. Assist nursery owners growing white pine in maintaining sanitary conditions around their nurseries. Scout for rust in order to keep a close check on its progress.

Status of Blister Bust Control Program on December 31, 1938

Indiana

Blister Bust Condition

Bust on Ribes nigrum was found in two counties, Porter and St. Joseph, in 1938. Bust has now been reported from four northern counties on Rices, and in 1930 in one county, Gibson, in southwestern portion, on imported white pine.

White Pine

There are now in Indiana about 3,995 acres of white pine and plantings often considered worth protecting. About 3,000 acres of this total are planted pine, and this acreage is annually increasing. White pine is considered desirable as a plantable species by the Soil Conservation Service for erosion control and windbreaks. Other agencies and organizations both governmental and private are planting considerable acreages of white pine each year. Pre-eradication surveys have been completed on 202 acres of native and 2,995 acres of planted pine. In addition 637 acres of planting sites have been surveyed and approved.

Status of Work Completed

Acres of W.P. and W.P.P.S. worth protecting -	3,995
Acres of W.P. and W.P.P.S. given initial working -	3,668
Acres of W.P. and W.P.P.S. given second working -	379
Percent given initial working 91.7%, second working, 9.5%	

Nursery Habitation

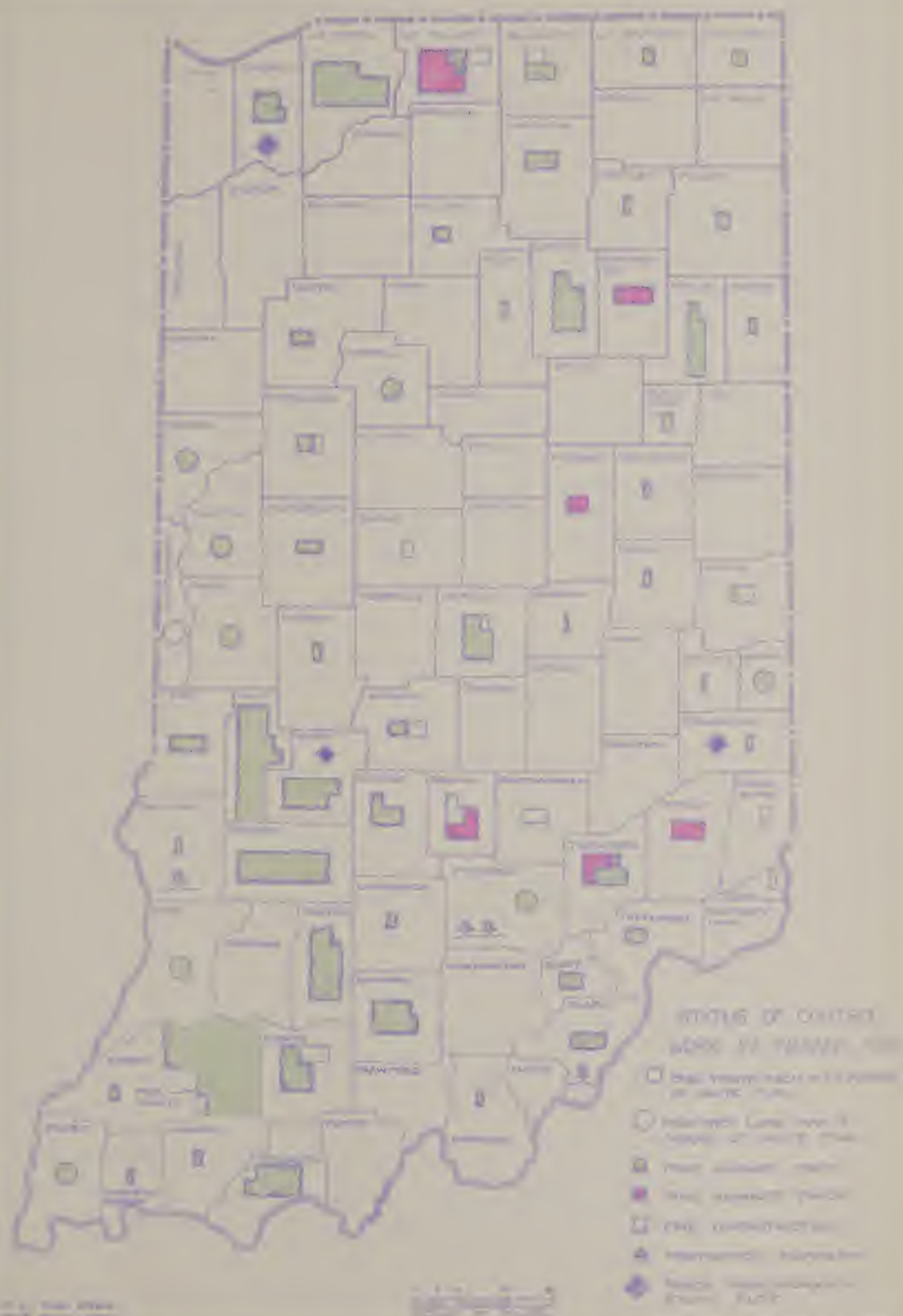
This work was not considered necessary during 1938, because the three nurseries growing pine were in a satisfactory sanitary condition.

Cultivated Black Currant Elimination

No systematic elimination of this currant is contemplated. Black currant removal is carried out only when necessary to protect pine stands or nurseries. This cultivated currant is not numerous in Indiana.

Recommendations for Future Work

Continue work to insure protection to plantations as they are established. Examine areas having received initial protection to determine necessity for any future workings with the ultimate aim of placing all areas on a maintenance basis. Occasional scouting to keep informed on the progress of spread of the rust.



Status of Elster Rust Control Program on December 31, 1938

Iowa

Elster Rust Conditions

Infected Ribes bushes have been found in 11 counties and infected pine in three of these counties. During 1938, five of these 11 counties were reported to have infection on Ribes for the first time. Infection is scattered throughout the northeastern portion of the state.

White Pine

White pine is found scattered throughout the north and eastern portion of the state chiefly as planted shelterbelts. There is a total of 5,600 acres listed for protection, of which 500 acres are native, 4,500 acres are planted white pine and 500 acres are approved planting sites. White pine is used mostly as a shelterbelt species. There are about 11,000 white pine shelterbelts, the majority of which are located in the northeastern quarter of the state.

Status of Local Control

Acres W.P. and W.P.F.S. worth protection - - -	5,600
Acres W.P. and W.P.F.S. given initial working -	2,132
Acres W.P. and W.P.F.S. given second working -	24
Percent protected initially 13-14% by second working 0.4%	

Nursery Sanitation

Four nurseries containing 367,000 white pine plants were given a sanitation working. Most Ribes are now cleared as sprouts and seedlings having been found where old bushes were removed in previous workings. These nurseries represent the total that will probably receive sanitation workings in the future.

Cultivated Black Current Eradication

This work had now been completed in approximately 25 of the counties which will ultimately be completely surveyed toward eliminating the black current. A total of 375 locations with 4,655 bushes has been destroyed.

Recommendations for Future Work

Continue local control work with emphasis on providing initial protection to remaining unprotected pine stands. Examine areas already

Status of Blister Rust Control Program on December 31, 1938

Michigan

Blister Rust Conditions

Rust on Pines has now been found in 76 counties, 13 of which had rust reported for the first time in 1938. During 1938, three additional counties were found to have infected pine, bringing the total of pine infected counties to 52. Blister rust is generally scattered over the entire state except in the extreme southeast corner of the lower peninsula.

White Pine

There is an estimated total of 586,691 acres including 545,218 acres of native pine, 14,455 acres of planted pine, and 27,018 acres of planting sites worth protection. Many pine stands of reproduction are being established naturally and artificially, and many areas, Pines free or nearly so, are available for future planting.

The best estimates of the ever-changing ownership status of the 559,673 acres of native and planted pine listed for protection are as follows:

	Acres	Percent
U. S. Forest Service	93,675	16.7
State	166,499	29.7
County, Municipal	9,820	1.8
Private	289,678	51.8
Total	559,673	100.0

Status of Local Control

Acres W.P. and W.P.P.S. worth protecting - - - 586,691
Acres W.P. and W.P.P.S. given initial working - 335,322
Acres W.P. and W.P.P.S. given second working - 32,716
Approximately 37.2% initial eradication and 5.6%
second working completed.

Nursery Sanitation

During 1938, nursery sanitation work was done around eight nurseries producing white pine. These nurseries, four Federal and three state and one private, contained over 17,000,000 white pines of seedling and transplant size. All of these nurseries except one in private ownership have had several workings and are in a satisfactory sanitary condition.

In the future an annual or biennial check for Aibes around these nurseries is all that will be necessary.

Cultivated Black Currant Elimination

Michigan in 1929, was the first state in this region to start a systematic cultivated black currant elimination program. It is probable also that more cultivated black currant bushes have been destroyed in Michigan than in any other state in the Union. To December 31, 1938, 130,677 bushes at 12,862 locations had been destroyed. The initial work is practically completed in 66 counties, and recheck work is finished in 52 of these. During 1938, 10,024 bushes at 1,187 locations were initially destroyed, and 2,216 bushes at 301 locations were destroyed on recheck. This gives a total of 12,240 bushes at 1,488 locations destroyed in 1938.

Recommendations for Future Work

Pre-radiation survey work is virtually completed. Future survey work will be chiefly concerned with areas to be planted. The elimination of cultivated black currant bushes has been initially completed, except within the mile zone of pine areas in counties not completely covered for these bushes. Recheck work is bearing completion.

Now that relief labor is still available the big job is to give initial protection to 251,169 acres remaining unprotected. Every effort should be directed toward this purpose. At the same time plans should be made to put on a maintenance basis all pine stands initially protected as soon and as effectively as possible.

STATUS OF LOCAL COUNTRY PROGRAMS IN MICHIGAN 1980

LEGEND



LOCAL W.P. NOT PROTECTED

LOCAL W.P. PROTECTED BY STATE

LOCAL W.P. ONLY BY COUNTY

1 = 1000 ACRES 200 ACRES 500 ACRES 1000 ACRES

LOCAL COUNTRY IN COUNTY PROTECTED

SCALE

1/4" = 1000 ACRES

Status of Blister Rust Control Program on December 31, 1938

Minnesota

Blister Rust Conditions

Blister rust has been found in all of the important pine producing counties. Rust on Pikes was particularly heavy during 1938. It was found for the first time on Pikes in Dakota, Goodhue, Otter Tail and Mahanomen Counties. Rust on pines has reached the damage stage at many points, especially in the eastern and northeastern portions of the state.

White Pine

As in the other Lake States, the amount of white pine is on the increase, due particularly to favorable weather conditions during the past two years, improved fire protection and better forestry practices. Including approved white pine planting sites, 14,596 acres, planted white pine, 6,997 acres, and native pine, 225,594 acres, the acreage to be protected now stands at 247,587 acres, an increase of 15,165 acres over the similar figure for 1937.

The ownership of white pine, native and planted, is continuously changing. Such estimates are as follows:

	<u>Acres</u>	<u>Percent</u>
U. S. Forest Service	53,207	22.8
U. S. Indian Service	24,578	10.7
State	67,472	29.0
County, Municipal	353	0.1
Private	87,191	37.4
<u>Total</u>	<u>247,587</u>	<u>100.0</u>

Status Local Control

Acres W.P. and W.P.P.S. worth protecting - - - - 247,587
Acres W.P. and W.P.P.S. given initial working - - 132,362
Acres W.P. and W.P.P.S. given second working - - 17,716
Percent given initial working 54.5%, second working 7.2%

Nursery Sanitation

Nursery sanitation was performed mostly as an annual check, around nine nurseries producing 12,116,115 white pine trees. These

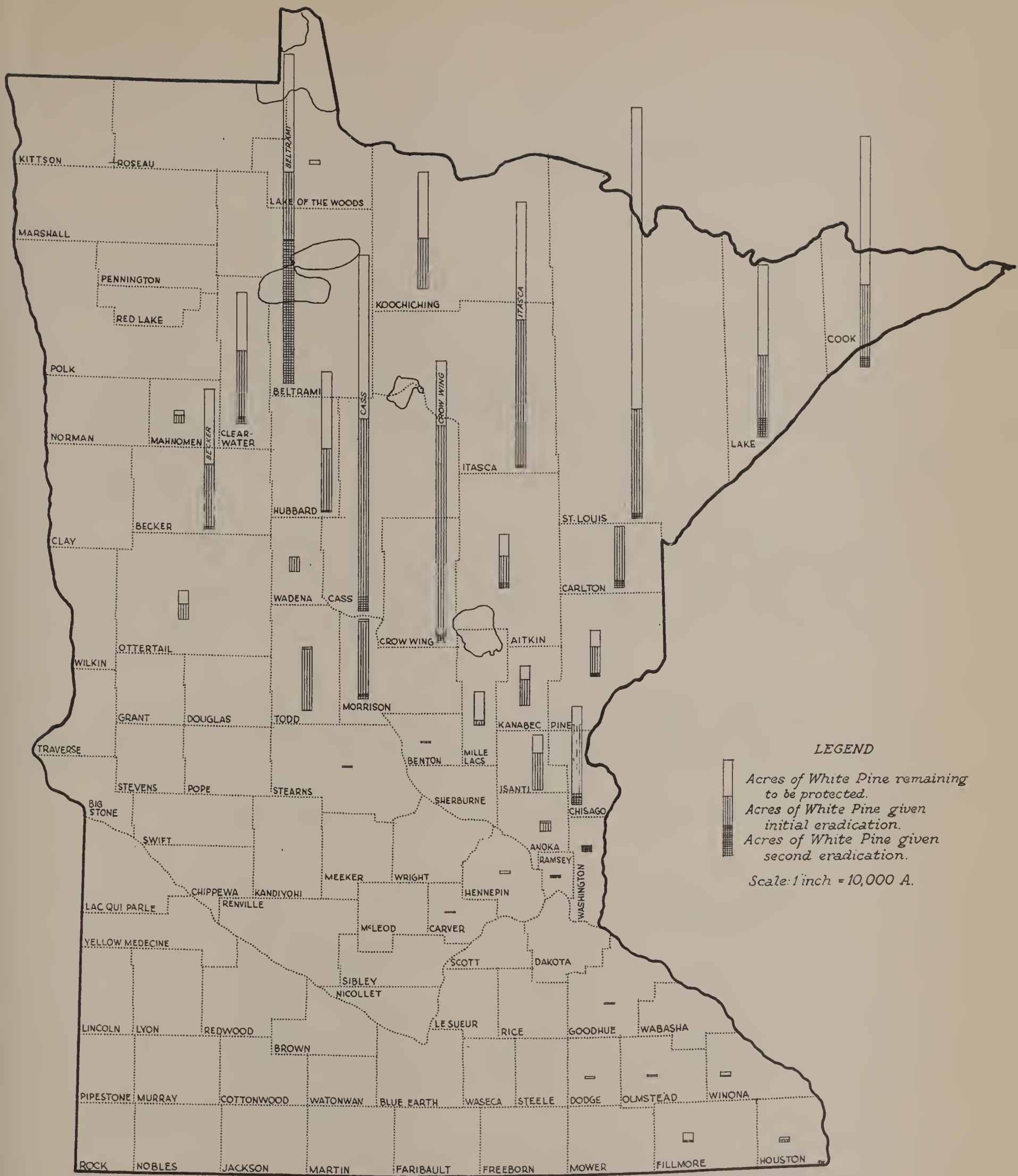
Supplies all the supplies needed for protection. An annual or biennial check is all that will be needed in future years.

Cultivated Black Currant Eradication

The initial elimination of cultivated black currants was essentially completed in 26 counties prior to 1937. This makes up the entire area to be gone over for these bushes. A small amount of recheck was done in seven of these counties in 1938 during which work 26 bushes in nine locations were found and destroyed. To date, 22,665 bushes in 2,996 locations have been destroyed in the original survey, 26 bushes in nine locations in recheck, or a grand total of 22,691 bushes in 3,005 locations destroyed. The only additional recheck contemplated in the future is in the general vicinity of Duluth, and along the north shore of Lake Superior, where many bushes were found originally.

Recommendations for Future Work

Pre-eradication survey is practically completed, except for inaccessible areas. Nursery sanitation will be confined to an annual or biennial check. Cultivated black currant elimination is completed except for a small amount of recheck near Duluth. The big job remaining, which should be pushed as hard as possible, now that relief labor is available, is the completion of initial local control around 119,705 acres not yet touched. When that work is completed, plans should be made, and the organization should be used, which will best insure the establishment and maintenance of control around all white pine stands worth such costs.



STATUS OF BLISTER RUST CONTROL
 MINNESOTA
 Dec. 31, 1938

Status of Blister Rust Control Program on December 31, 1938

Ohio

Blister Rust Conditions

The known range of rust on Eiber was materially extended in 1938, to include 14 counties in northwestern Ohio in the list of infested counties. Pine infection was found for the first time in 1938, in Ashland, Holmes and Knox Counties. To December 31, 1938, rust on Eiber had been reported from 26 counties and pine infection from eight counties.

White Pine

The use of white pine planting stock for reforestation and soil erosion control purposes, active in the state for the past several years, received a still greater impetus in 1938. During this year 449 plantings containing 1,236,772 white pine trees were established, the largest by about 300,000 trees of plantings made in any previous year.

To date it is estimated there are 4,065 acres of native pine, 6,005 acres planted pine, and 1,433 acres of approved white pine planting sites, a total of 11,503 acres worthy of protection. Acres of planted pine and planting sites will continue to increase.

The ownership of 10,670 acres of white pine, native and planted, is estimated as follows:

	Acres	Percent
U. S. Forest Service	13	0.1
Other Federal	279	2.6
State	1,085	19.7
County, Municipal	800	8.0
Private	6,993	69.4
Total	10,670	100.0

Status of Local Control

Acres of W.P. and W.P.P.S. worth protecting - - - 11,503
Acres of W.P. and W.P.P.S. given initial working - 5,627
Acres of W.P. and W.P.P.S. given second working - 1,800
Percent given initial working, 48.9%, second working 15.8%

Barberry Elimination

There are four nurseries in Ohio producing approximately 2,000 000 white pines for reforestation purposes. These have been put in sanitary condition and require only an annual or biennial check. There are 52 nurseries growing limited amounts of white pine. Higher eradication has been completed around six of these nurseries, or 10 in the state.

Cultivated Black Barberry Elimination

The initial elimination of cultivated black barberry has been completed in 54 counties, which completes this phase of the program in Ohio. A total of 60,977 bushes at 7,815 locations has been destroyed. Practically no recheck work has been done. It may be necessary in the future to recheck certain areas where these bushes were originally numerous.

Recommendations for Future Work

A considerable amount of pre-eradication survey work will be necessary yearly in order to keep up with the planting program. Both by State and Soil Conservation Service. By doing pre-eradication survey work prior to planting, it is often possible to prevent planting on areas of too heavy black concentrations. Often also it is unnecessary to perform local control on areas found to be black-free.

All workers should be employed in performing initial local control on areas needing it, and to keep up protection work with plantations as they are established.

Barberry eradication will require only an annual or biennial check around nurseries where control is already established.

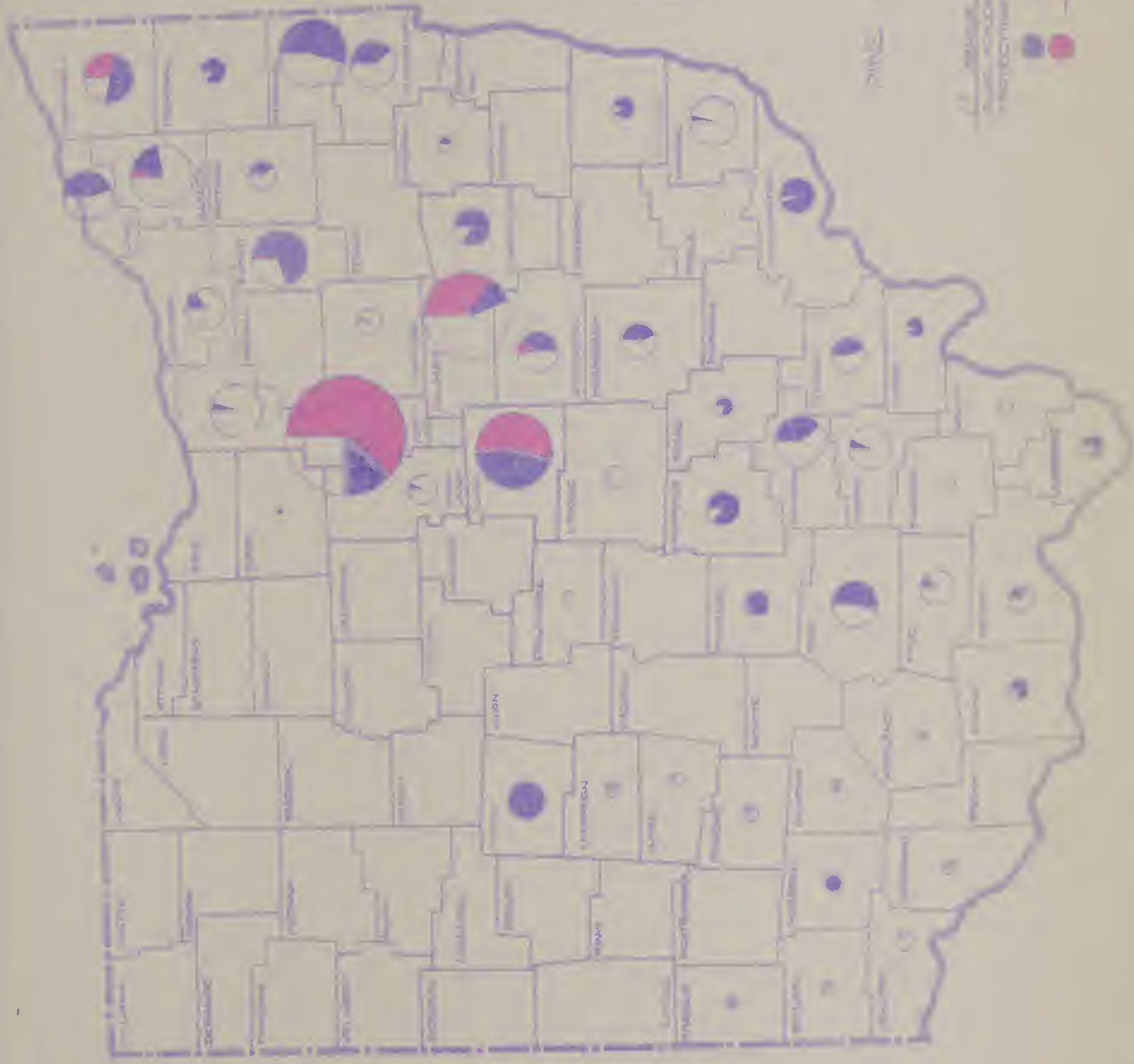
Initial cultivated black barberry elimination has been completed. In the future a certain amount of recheck may be necessary for certain portions.



Notes: In Columbus, Ohio, the vote was split between the two major parties, with the Democrats receiving 55% of the vote and the Republicans receiving 30%. The remaining 15% of the vote was split among several minor parties.

OHIO VOTES BY COUNTY

Legend:
 Blue = Democrat
 Red = Republican
 White = Other



Status of Blister Rust Control Program on December 31, 1938

Wisconsin

Blister Rust Conditions

During 1938, rust was reported on Ribes for the first time in 13 southern counties, namely, Calumet, Columbia, Crawford, Dodge, Juneau, Green, Green Lake, Iowa, Marquette, Osaukee, Richland, Rock, and Washington. Pine infection in 1938, was found initially also in Columbia and Juneau Counties. To December 31, 1938, the rust had been reported from 69 counties, and pine infection from 49 counties. Only two counties, Jefferson and Lafayette, remain from which the rust has not been reported on either host.

White Pine

As in the other lake states, the amount of white pine is on the increase, due particularly to recent favorable weather conditions, an accelerated planting program, improved fire protection, and better forestry practices. Including approved white pine planting sites, 14,106 acres, planted pine, 13,763 acres, and native pine, 333,237 acres, the acreage to be protected now stands at 351,106 acres, an increase of 12,175 acres over the figure given at the end of 1937.

The ownership of white pine, native and planted is continuously changing. Best estimates are as follows:

	<u>Acre</u>	<u>Percent</u>
U. S. Forest Service	24,100	6.9
U. S. Indian Service	23,550	6.7
Other Federal	2,000	0.6
State	18,550	5.3
County, Municipal	29,900	8.5
Private	243,500	70.2
Total	347,000	100.0

Status Local Control

Acreage W.P. and W.P.P.S. worth protecting - - - - 351,106
Acreage W.P. and W.P.P.S. given initial working - - 200,511
Acreage W.P. and W.P.P.S. given second working - - 16,055
Percent given initial working 61.8%, second working 5.7%

Nursery Sanitation

In 1938, this work was performed simply as an annual check for Ribes around two U. S. Forest Service, one Soil Conservation Service, three State, and two Private nurseries containing 19,604,620 white pine plants. Initial protection around these nurseries had been established previously. These nurseries are the only ones in the state producing white pine for reforestation purposes. It is expected that nursery sanitation in the future will be confined to an annual or biennial check for Ribes around these nurseries.

Cultivated Black Current Elimination

Initial elimination has been completed in the 51 counties comprising the white pine growing area. Reseck has been completed in 16, and partially completed in 13 of these counties. Reseck in the remaining 22 counties is planned.

To date 33,638 bushes in 5,612 locations initially, and 2,054 bushes in 561 locations on reseck, a total of 35,692 bushes in 6,173 locations, have been found and destroyed.

Recommendations for Future Work

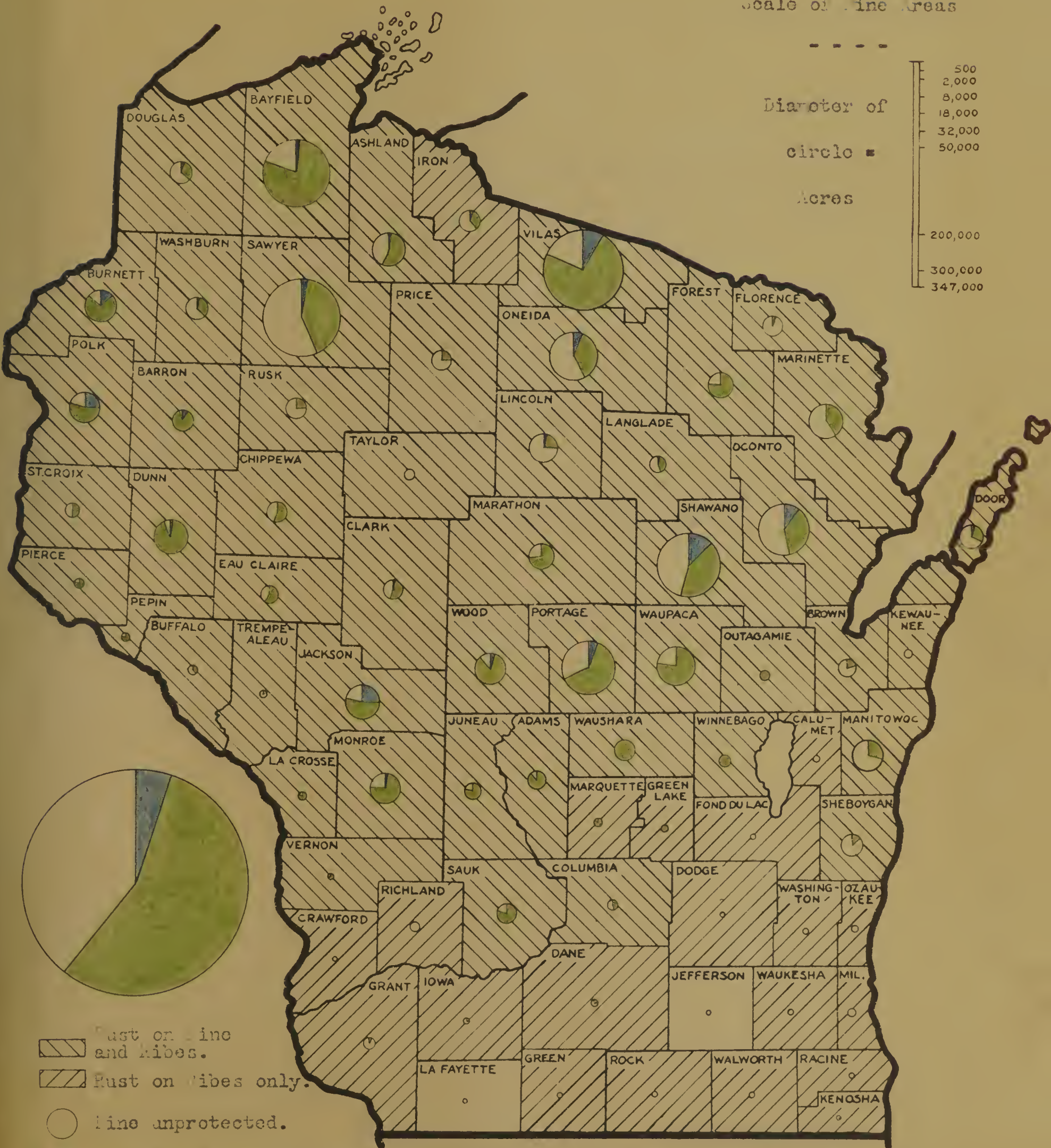
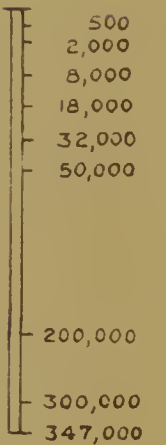
Pre-radiation survey is practically completed, except for inaccessible areas, and areas which will be planted in the future. Nursery sanitation is on a maintenance basis. Initial cultivated black current elimination is completed in 51 counties and reseck work remains to be done in 22 of the counties, and partially in 13. This work should be completed.

There remains the big job of furnishing initial protection to 140,855 acres of white pine and planting sites, and the placing on a maintenance basis the full 363,404 acres as soon as possible. Initial control work should be pushed as rapidly as possible while labor is available. Plans should be perfected for necessary work of maintaining control on areas where initial work has been completed.

STATUS OF CONTROL WORK IN WISCONSIN 1938

Scale of Line Areas

Diameter of
circle =
Acres



347,000 acres white line north protecting.
200,296 acres white line worked once.
18,053 acres white line worked twice.
60.03% Initially Protected.

Status of Blister Rust Control Program on December 31, 1938

Missouri

The only work done in Missouri was a short scouting trip on October 23 to 25, 1938 performed by the Regional Leader and Iowa State Leader. The purpose was to scout for the rust and to learn something of the extent and occurrence of white pine. The trip extended from east to west across the northern portion of the state.

No rust was found. No cultivated black currants were located, although alleys were scouted in a few dozen towns.

White pine shelterbelts were seen in the northwestern portion. White pine plantations growing well were found at Gray Summit under jurisdiction of the Missouri Botanical Garden, St. Louis. The State Highway Department had used white pine as roadside trees quite extensively, although the majority of these trees were not doing well.

A conference was had with Mr. Fowl, Extension Forester, and with Mr. Zimmerman, Professor of Forestry at Columbia, Missouri. White pine is not used extensively as a reforestation tree in the state.

It would appear from this brief inspection trip in the state that no control work is justified in Missouri at the present time.

Organization

The same general organization was in effect in 1938 as during the previous four years. Mr. Fred F. Franklin who has occupied the position of Assistant Regional Leader since 1934 died on June 11, 1938. His position was filled by Mr. Leiton E. Nelson. Mr. Nelson's former position as Regional Blister Rust Control Inspector in the Forest Service was filled by Mr. Frederick F. Staat. The organization to conduct the control program in the North Central Region is shown in the Organization Chart.

Authorization for Work

As in the past several years the work was conducted under a Memorandum of Understanding drawn up between the responsible state agency in each state, and the Bureau of Entomology and Plant Quarantine. For detailed descriptions of the Memorandum of Understanding and other memoranda governing our work reference is made to the 1936 Annual Report.

Cooperating Agencies

During 1936 the general blister rust control program was conducted through contributions from 15 programs and agencies. A description of the type of assistance furnished by each of these agencies is given in the 1937 Annual Report and will not be repeated here.

Federal W. P. A. Program

General

As in previous years the Regional Leader at Milwaukee was continued as Project Manager and the funds for all of the states were handled through the Milwaukee office and paid from the Treasury Accounts Office at Madison, Wisconsin. In cooperation with each State Leader budgets were prepared by month for each state's sub-allotment, such as mosquitoes salaries, non-relief salaries, relief salaries, travel, automobile expenditures, supplies and reserves. These budgets were in accordance with existing requirements as to the 25-5 ratio or with exemptions therefrom, and the over-all month-month cost limitation. The expenditure of funds was in accord with the budgets as ascertained by frequent comparisons, thus assuring compliance with the requirements.

ORGANIZATION CHART FOR NORTH CENTRAL REGION 1938



These W.P.A. funds were used for the employment of district leaders, supervisors, foremen and laborers. Wage rates used were those authorized by each State W.P.A. Administrator. In addition W.P.A. administrative funds were used for the employment of clerks, travel and other expenses of the Milwaukee office.

A very satisfactory spirit of cooperation was maintained between our organization and the several State W.P.A. organizations. The Treasury Accounts Office at Madison continued to cooperate very closely in paying vouchers promptly and in giving us valuable assistance in many fiscal problems. In general, use of these Federal W.P.A. funds in blister rust control work has proven very successful.

Number of Men Employed

A careful and accurate record was kept of the number of men employed by states, months and classifications of men. In Table 1 there is shown the approximate number of man-months employed by months in the Milwaukee office. In Table 2 there is shown the number of man-months of employment in the Region by months and programs. Table 3 gives the number of man-months employed by states and classifications of men. In Table 4 there is shown the number of man-months used on the Federal W.P.A. program by states and classifications of men.

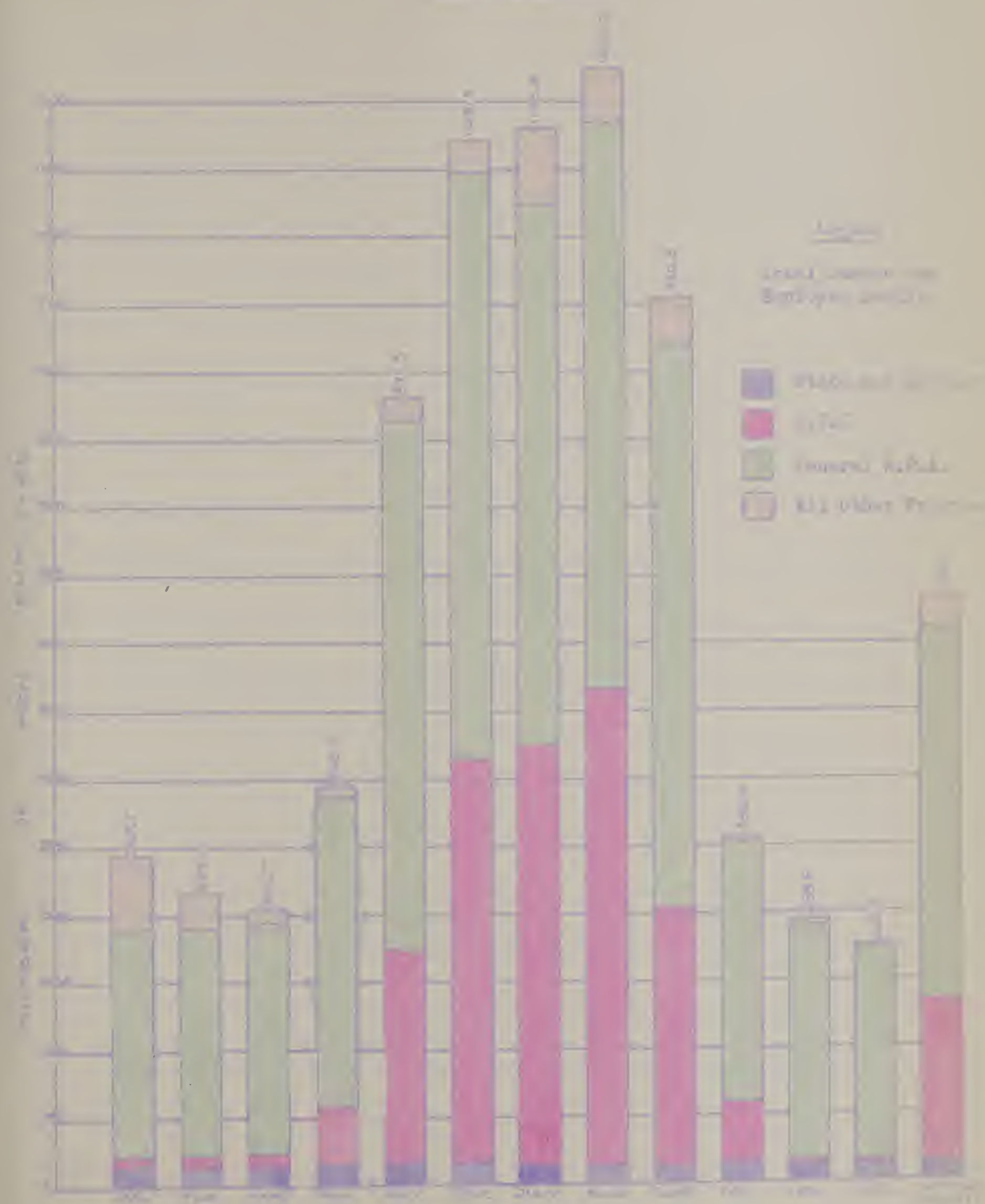
In all of these tables it must be remembered that the man-months of employment under the Federal W.P.A. program are accurate and actual as derived by dividing the number of hours on each payroll by the number of assigned hours per month. In the case of programs other than the W.P.A. it was not possible so accurately to derive the man-months.

The material in Table 2 is shown graphically in Chart 1. In this chart the total employment on blister rust control has been grouped in four classes; viz., State and Regional W.P.A., Federal W.P.A., and all other programs. If this chart is compared with the similar chart for the year 1937 it will be noted that the average number of man-months per month for the entire year, 648.7, was almost identical with the number for 1937; viz., 648.9. It may be noted, however, that while in 1937 the employment of men averaged about 406 per month during the season inactive months, the average for the like period in 1938 was 519 men. During the active field season from May to September 1937 the average monthly employment was 929 as contrasted with 1,062 in 1938. The higher proportion of men employed during the 1938 field season was reflected in the larger amount of control work accomplished.

Wage Rates Under W.P.A.

During 1938 wage rates used on the blister rust control projects conformed to those used on other W.P.A. projects in the same counties or districts. The authorized hours per month, while they varied between states, were fairly constant in each state with the exception of Wisconsin and Minnesota, where they varied locally between different counties.

County of San Diego, California, Department of Public Health, Division of Health Statistics, 1910-1911.
Table 1.
Deaths from Tuberculosis.



The range of hours and rates used in this Region in 1938 were substantially the same as used in 1937. This range is shown in Table 42 of the 1937 Annual Report.

Compensation Cases

The number of compensation cases under the W.P.A. program by states is given in Table 5, and by months in Table 5A. There was a decided increase in the number of compensation cases in 1938 over 1936 and 1937. Per 1,000 man-months there were in 1938, 10.85 compensation cases, 2.84 in 1937, and 7.23 in 1936. A comparison of number of cases by type of injury between the years 1936, 1937 and 1938 is interesting, as shown following:

Comparison in Number of Compensation Cases, W.P.A. Program, North Central Region, 1936, 1937 and 1938.

No.	In-	Ivy &	Cuts
W.P.A.	sect	other	Sprains
Man-	In-	Plant	Thorns
Year	months	Heat	jury
		jury	Poison
			tions
			fractures
			Bruises
			Organic
			Total
Total Number Cases			
1936	12,025	3	5
1937	4,583	-	-
1938	4,976	-	-
Total	21,584	3	5
Number Cases per 1,000 Man-months			
1936	12,025	0.25	0.4
1937	4,583	-	-
1938	4,976	-	-
Total	21,584	0.14	0.23

The most common cause of injury in 1938 was poison ivy. For some reason this injury was much more prevalent in 1938 than in the other two years. Injuries to the eye were quite common in each of the years. Cuts, sprains and bruises led in types of injuries during the three year period, although this was not common in 1937. No injury due to heat was reported except in 1936.

Attention is directed to Table 5. It will be noted that Iowa led the states with the largest number of cases per 1,000 man-months due principally to poison ivy cases. Michigan reported nine poison ivy injuries. These two states accounted for 15 of the 19 poison ivy cases reported.

Eye injuries, chiefly in the three Lake States, accounted for the second largest class of cases. These injuries were largely caused by twigs getting into their eyes as the men went through the brush.

Two states, Ohio and Delaware, reported no compensation cases.

In spite of the relatively large number of cases reported, few were serious, little time was lost and there were no fatalities. In fact, during the 21,584 man-months employed in the three years, no fatalities due to the work have been reported.

In Table 5A the number of compensation cases in 1938 is shown by months. Not only the largest number, but the highest rate of accidents occurred during the field season, from May through October. During this six-months period of the 54 accidents, 48, or approximately 89%, occurred. Peacetime cases accounted for 18 of these injuries. No accidents were reported for the months of March and December.

Automobile Accident Cases

During 1938 there were 21 passenger-carrying cars and 51 trucks operated in the Region. In spite of this large number of vehicles used, only five accidents were reported. These reports are listed below.

1. Chevrolet coach, 1934, License U.S.D.A. 56-635.

Place - T. 35W. R. 3W. Sec. 26, on Highway
M-66, Michigan.

Date - August 17, 1938.

Cause - Government car was struck from the rear while proceeding slowly down highway behind car which was waiting for oncoming traffic to pass before making left turn. Party striking government car responsible for accident.

Damage to government car - Damaged rear end. Government car was completely repaired at a cost of \$150. by the insurance company of the party hitting government car.

2. Dodge pick-up, 1935, License U.S.D.A. 38-235.

Place - Newaygo, Michigan.

Date - June 21, 1938.

Cause - Government car allegedly backed into car immediately behind. The government car had been parked and left by driver.

Damage to government car - None. Damage to car behind, a dented fender. Claim for damage was disallowed by the government.

3. Dodge pick-up, 1935, License U.S.D.A. 38-235.

Place - Newaygo County, Michigan, T. 12N. R. 11W.
Sec. 4.

Date - August 16, 1938.

Cause - Private car attempted to pass government car on curve. Private car traveling at

excessive speed accident into left front end of government car.

Damage to government car - Minor damage to fender and bumper of government car. Repaired by government.

4. Buick sedan, 1934, License U.S.D.A. 56-637.

Place - Evanston, Illinois

Date - March 27, 1938.

Cause - Government car was passing private car on pavement. Government car slipped off on left side of pavement and in attempting to pull back on the pavement turned too sharply hooking rear fender on private car's front bumper.

Damage to government car - Right rear fender bent. Repaired by government.

5. Ford pick-up, 1937, License U.S.D.A. 55-602.

Place - Duluth, Minnesota.

Date - August 1, 1938.

Cause - Private car failed to stop before entering arterial highway and, therefore, struck and damaged government truck.

Damage to government car - Dented front and rear fender. Front door dented in, dented running board and bent tire carrier. Total damage to government car about \$25. Paid by private party.

Spread of the Rust

Weather conditions during 1938, particularly during the summer months, were extremely favorable to the further spread and intensification of the rust. In addition to finding an increased local spread in areas previously known to be infected, a decided southern spread of the rust was discovered on Ribes in the last part of the summer in southern Wisconsin, northern Illinois, northeastern Ohio and southern Michigan. The 1938 infections found and the general status of infection are listed following by states:

Illinois - Previous to 1938 the only blister rust infection known in Illinois was found on Ribes nigrum in 1935 at Warren, Jo Daviess County. During 1937, 19 locations of rust on Ribes were found in five northern counties; viz., Lake, Kane, McHenry, Boone, and Winnebago. In 1938, 54 locations of rust on Ribes were found in 10 counties; viz., Lake, Kane, McHenry, Boone, Winnebago, DeKalb, Cole, Stephenson, Jo Daviess and Whiteside. Nearly all of these infections were found on R. nigrum. The heaviest infections were found in Lake, Stephenson and Winnebago Counties. To date no white pine infected with blister rust has been found.

Indiana - A very limited amount of scouting for the rust in Indiana resulted in the finding of infected black currants in Valparaiso, Porter County, and in Mishawaka, St. Joseph County. It is probable that were extensive scouting for the rust would have disclosed a larger number of infections.

Iowa - In 1938, infection on Ribes, chiefly R. nigra, was found for the first time in five counties; viz., Winnebago, Butler, Clayton, Clinton and Chickasaw. During 1938 pine infection was found in Dubuque County. To date Ribes infection has been found in 11 counties, mostly in the northeastern portion; viz., Lyon, Linn, Fayette, Story, Dubuque, Palo Alto, Winnebago, Butler, Clayton, Clinton and Chickasaw. Pine infection is known in three counties. It was found in Lyon County in 1917, in Story County in 1931 and in Dubuque County in 1934. All infected pines found have been destroyed.

Michigan - Infection on Ribes was found for the first time in 1936 in Barry, Berrien, Branch, Crawford, Eaton, Ionia, Kalamazoo, Saline, Lake, Muskegon, St. Joseph, Van Buren and Wexford Counties. With the exception of Crawford and Wexford Counties these counties all lie in the northern portion of the Lower Peninsula. Pine infection was found for the first time in 1936 in three counties; viz., Chippewa, Grand Traverse and Montcalm. To date infection on Ribes has been found in 76 counties and pine infection in 32 counties. Thus with the exception of five counties in the extreme southern part of the state infection either on Ribes or pines, or both, has been found in all of the counties in Michigan. The rust has reached the damage stage at several points in Marquette and Dickinson Counties in Upper Michigan and in Searcy County in Lower Michigan.

Minnesota - Infection is generally distributed throughout the pine-growing areas of Minnesota. Pine infection is particularly severe in the general vicinities of Duluth, South Duff and nearby points. In 1938 the known distribution of the rust on Ribes was extended southward to include the counties of Dakota, Goodhue, Otter Tail and Mahoning. To date rust on Ribes has been found in 31 counties and pine infection in 26 counties.

Ohio - Rust on Ribes was found for the first time in 14 counties; viz., Allen, Ashland, DeLaware, Laramie, Henry, Holmes, Lucas, Paulding, Putnam, Sandusky, Seneca, Williams, Wood and Wyandot. Additional Ribes infections were also found in other counties where infection had previously been reported. Pine infection was found for the first time in three counties; viz., Ashland, Holmes and Knox. The finding of rust in 1938 included the northwestern counties in the category of infected counties and materially extended the known range of infection of which pines, particularly in the northeastern portion. To date rust on Ribes has been found in 26 counties and pine infection in eight counties.

Wisconsin - During 1938 the rust was found on Ribes for the first time in 11 counties in the southern part of the state; viz., Calumet, Crawford, Dodge, Grant, Green Lake, Iowa, Marquette, Oshkosh,

Richland, Beck and Washington. On white pine it was found for the first time in Columbia and James Counties. The disease now is known to be active on white pines or Ribes, or both, in all counties of the state except Jefferson and Lafayette.

White Pine

General

In the 1936 Annual Report there is given a statement of estimated value of white pine in this Region amounting to \$63,000,000. No attempt is made to alter this valuation for the 1938 Annual Report.

The acreage of white pine in this Region is decidedly on the increase. This is due not only to the very active program of planting white pine by various agencies in the Region but also to better methods of fire protection and improved forestry practices. Weather conditions during 1937 and 1938 were favorable to germination and growth of white pine coming in naturally. From Table 8 it will be noted that of the total of 1,217,207 acres of white pine listed for protection 1,109,416 were native white pine, 47,374 were planted and 60,417 were approved white pine planting sites. The acreage listed for protection is not a static figure. At the present time it is on the increase. For example, the acreage listed for protection in 1933 is 55,393 acres greater than that listed in 1937.

Ownership

The ownership status of white pine in the Region is in a constant state of flux. Based on Table 14 the percentages of the acreage of white pine, exclusive of planting sites, listed for protection in the different classes of ownership were as follows:

Federal Forest Service	14.7%
Federal Indian Service	1.0
Other Federal Ownership	0.2
State	22.2
County and Municipal	3.6
Private	54.7
Total	100.0

Pre-eradication Survey

A description of the methods and purposes of making pre-eradication surveys is given in previous Annual Reports and will not be repeated here. It is sufficient to state that the making of complete

and accurate pre-radiation surveys around pine stands to be protected is one of the most important phases of the general control program and is the basis for all future work.

Pre-radiation Survey Work 1958

In Tables 6 and 7 are given statements of pre-radiation survey work performed in 1958 by states according to agency performing the work and ownership class, respectively. It will be noted that 144,020 acres of white pine and planting sites were mapped of which 75,715 acres were classified as worth protection. Including the control acres a total of 251,153 acres was mapped to protect 75,715 acres. This work required 1,527 man-days costing \$20,410.83. Thus on the average approximately 65 acres were mapped per man-day, and the cost was \$0.07 per acre. In this connection it may be noted that the cost of survey work in Minnesota is considerably higher than the Regional average. The reason for this added cost is that in Minnesota a large amount of scattered white pine is mapped for future reference which at the present time does not justify protection costs. The largest amount of pre-radiation work was performed under the N.F.A. program. A much smaller amount of work was done by the U.S.C. and only a relatively small amount of work was performed by men employed on Regular or State funds.

Approximately 56% of the acreage mapped was white pine planting sites. In making pre-radiation surveys around planting sites more intensive work is usually done. Often as certain planting sites which are ripened, or practically so, no further work is needed. Therefore usually some pre-radiation survey work could logically be charged to local controls. However, for simplicity such work is charged to pre-radiation survey.

Cumulative Pre-radiation Survey Work

In Table 8 there is shown a statement of total acreages given pre-radiation survey to date. It will be noted that of the 1,217,207 acres of white pine and white pine planting sites listed for protection 1,064,306 acres, or nearly 90%, have been covered by pre-radiation survey. While it is true that the major portion of the pre-radiation survey work is completed, it is also true that so long as white pine is being planted and is coming in naturally under seed trees there will always be a certain amount of pre-radiation survey work to be done each year.

In Table 8a there is shown by states a statement of the total control problem classified according to native white pine, planted white pine and white pine planting sites. For the Region as a whole, it will be necessary to remove skads from 4,823,366 acres to protect 1,215,753 acres of white pine and planting sites. This is at the ratio of one acre protected to four acres worked. In Iowa 296,000 acres should be worked to protect 5,000 acres of white pine and planting sites. This is at the ratio of one acre protected to 100

acres worked. The reason for this high ratio is that in Iowa white pine occurs principally as shelterbelts, each one containing only a fraction of an acre. The control zone around each shelterbelt is usually 55 to 60 acres. While all but one to three acres in such control zone consists of cultivated fields, the entire zone must be counted within the control zone. If we eliminate Iowa from consideration the ratio of acres protected to acres worked becomes approximately 1.5 to 3.5.

Local Control in 1958

Local control work performed in 1958 is shown in Tables 9 to 13 classified by states and agencies and listed separately for initial mop-up, second and third eradication.

From Table 13 it will be noted that in all eradication 131,009 acres were protected by removing 28,700,421 hides from 475,437 acres of land. This required 84,576 man-days of labor and supervision and cost \$260,375.81. On a per acre basis, 39.3 bushes were pulled, 0.18 man-day was expended and the cost amounted to \$0.55 per acre worked.

These per acre figures compare favorably with similar figures in 1957. At that time on a per acre basis 50.9 bushes were pulled, 0.24 man-day was expended and the cost amounted to \$0.74 per acre worked.

The volume of work done in 1958 was higher than that performed in 1957. A total of 310,119 acres was worked in 1957 compared with 475,437 acres in 1958. Slightly more than 85% of the acres worked in 1958 was initial work, 11% was second working and less than 1% was third working.

Approximately 69% of the total acreage worked in 1958 was performed by the spot method and 31% by the area method. This is similar to the way work was done in 1957 when 70% was worked by spot and 30% by area.

The principal agencies performing local control in 1958 consisted of the W.F.A. and the O.C.C. The O.C.C. was under the jurisdiction of agencies such as the Forest Service, Indian Service, Soil Conservation Service and State. Nearly 68% of the acreage was worked by W.F.A. employees and 32% by the O.C.C. The remaining 3% was worked by men employed under Federal funds, Private funds and State W.F.A.

Only a very small acreage was covered in mop-up. 1,438 acres in the Region. Most of the mop-up work was done after initial eradication. However, some of it was performed after second eradication. This mop-up as the name implies, is simply additional working of areas unsatisfactorily worked the first time. The acres worked and

timber protected in mop-up are not included in the totals. The reason for this, of course, is that these acreages have already been reported under either initial or second eradication.

There follows a statement covering local control in 1938 in each of the states.

Illinois

In Illinois control work was done by only two agencies, W.P.A. and Private. Nearly all of the work done was initial work under the W.P.A. program, while most of the work done by private operators was second eradication.

Some of the work in Illinois was difficult and slow going due principally to conditions requiring the use of rope in allowing workers to reach timber in the cliffs. This was particularly true in Starved Rock and Pines State Parks.

Indiana

No local control work was done in Indiana in 1937. In 1938, however, as a result of a considerable amount of activity in planting white pine, both by the State and Soil Conservation Service, the largest amount of local control work was performed in any one year since the work started. A total of 27,583 acres was worked to eradicate 2,305 acres of white pine and white pine planting sites. With the exception of 125 acres worked the second time all of the 27,583 acres were covered by initial eradication.

Local control was performed by three agencies - Soil Conservation Service, W.P.A., Regular and contributed. Approximately 5,700 acres were worked by the Soil Conservation Service, 13,700 by the W.P.A. and 10,000 by Regular and Cooperative.

On initial eradication average per acre figures show 3.03 saw-logs, 10.08 and 3.5 Ribes. Fortunately the lower third of Indiana is almost entirely Ribes-free. This condition makes average cost figures and acres per acre very low. There are excellent areas for planting white pine in the Ribes-free portions of the state.

Iowa

In Iowa the control problem chiefly concerns the protection of white pine shelterbelts. During 1938, 754 shelterbelts containing 290 acres were given initial eradication. This involved the removal of 322,777 Ribes from 10,409 acres, requiring 2,348 man-days. All of this work was done under the W.P.A. program although in certain instances owners furnished labor to assist the W.P.A. workers in the protection of their shelterbelts.

Of the total of 13,499 acres worked, 13,257, or over 97%, were cultivated fields and were covered by the usual method. It is interesting to note 1,178 acres in 75% areas were worked by crew. This is an average of slightly more than 1.5 acres of crew work per shelterbelt.

A small amount of mop-up work around 51 shelterbelts was performed. Since the acreages on mop-up work are included in initial working they are not repeated under mop-up work. From the 51 areas covered by mop-up 1,183 Ribes were pulled using 59 man-days of labor.

All of the work done in Iowa in 1938 was on private property.

Michigan

Work in Michigan was performed chiefly by men employed on two programs, W.P.A. and the C.C.C. The C.C.C. was administered by the Forest Service, Indian Service and State. Control work was organized and carried on in the same manner in 1938 as in 1937.

A total of 166,359 acres was covered on initial, second and third workings in 1938 as compared with 130,427 acres in 1937. Approximately 85% of the acreage was covered initially, 11% was second working, and 4% was third working.

The average man-day used, 0.12, and the average number of Ribes, 18.5, per acre in 1938 initial work, were the lowest since local control started in 1928. On second eradication in 1938, 0.19 man-day was used in pulling 28.3 Ribes per acre. Third eradication was performed for the first time in Michigan in 1938. In third eradication 0.24 man-day was used in pulling 53.5 Ribes per acre. Thus the average number of Ribes pulled per acre in 1938 was 18.5 initial work, 28.3 in second eradication and 53.5 in third eradication. The reason for this increase in the number of Ribes pulled per acre from initial to third was that on second and third workings only those areas supporting a large number of Ribes were given subsequent workings. If the Ribes found initially on these same areas had been compared on a per acre basis with the Ribes found on second and third eradications, a reduction in the number of Ribes per acre would have been observed instead of an increase.

Of the 166,359 acres worked in Michigan in 1938, 64,579 or nearly 39% were worked by crew.

A total of 47,633 acres of white pine was given initial protection during 1938. Of this total 30.7% was owned by the Federal Government, 29.9% by the State, 0.5% by the County and Municipal and 37.1% by private individuals.

Minnesota

Local control in Minnesota in 1938 was carried on chiefly through the C.C.C. program as conducted by the U. S. Forest Service, Indian

Service and State and by the W.F.A. program working on all ownerships but chiefly private.

The eradication chain saw method was used in 1938 under the W.F.A. program. A complete description of this method, which proved well adapted to Minnesota conditions, is given in the 1937 Annual Report and will not be repeated here.

During 1938, 16,967 acres of white pine and white pine planting sites were protected by removing 6,818,116 Ribes from 56,151 acres. This required the use of 17,691 man-days and cost \$44,905.04. Thus from the average acre worked 110 Ribes were pulled at a cost of 0.21 man-day or \$0.60.

In second eradication 4,000 acres of white pine were protected by removing 1,166,925 Ribes from 12,646 acres. This required 1,196 man-days and cost \$12,427.45. Thus from the average acre worked 92 Ribes were pulled by 0.33 man-day costing \$0.99.

Of the 67,097 acres worked in 1938, 56,151 acres, or 83%, were covered by initial eradication.

Approximately 40% of the acreage worked in 1938 was worked by crew and 60% by scout.

In 1937, 29,351 acres were worked. Thus nearly 30,000 acres were worked in 1938 more than in 1937. The acreage worked in 1938 was exceeded only by that covered in 1936.

Ohio

Local control in Ohio during 1938 was performed by State S.C.C., Soil Conservation S.C.C., and the Federal W.F.A. program. The Soil Conservation Service through its S.C.C. camps performed a large amount of Ribes eradication around its plantings of white pine on former lands. Close cooperation between the Cluster Pest Control organization and the Soil Conservation Service was maintained at all times.

In initial eradication 1,050 acres of white pine and white pine planting site were protected by removing 109,579 Ribes from 17,741 acres. To do this work 1,398 man-days were used, costing \$3,250.72. Thus from the average acre 6.2 Ribes were removed by 0.07 man-day, costing \$0.22.

In second eradication 2,513 acres of white pine and white pine planting site were protected by removing 198,540 Ribes from 7,072 acres. This required 3,280 man-days and cost \$9,595.92. Thus from the average acre given second working 30.1 Ribes were removed by 0.16 man-day costing \$1.16. There is a sharp contrast in the average number of Ribes pulled per acre on initial working, 6.2, with 30.1 Ribes pulled in second eradication. The reason for this difference lies in the fact

Chart 2 - Total acres of White Pine National Forest, and acres initially proposed to be removed in 1992 - under separate review
Based on Table 10.

Ownership Class	Total Acres White Pine	Acres Initially Proposed	Percent Initially Proposed
Federal Forest Service	170,796	81,510	47.7
Federal Indian Service	53,435	40,352	75.5
Other Federal	2,496	974	39.0
State	252,465	154,689	60.9
County/Indian	61,335	30,755	50.1
Private	104,219	271,304	259.0
Total	644,346	681,410	105.7



survey has not yet worked, and 859,455 acres have either been surveyed or worked. Of this last figure, however, 384,049 acres are in Towns almost entirely around shelterbelts. Making pre-eradication surveys around these shelterbelts is not a difficult task and will be done in connection with the cultivated block current survey.

In Tables 22 and 23 there are shown by forests and years initial and second control workings performed on national forest lands. The above stated landings on national forest lands have been almost entirely performed with C.C.I. labor. A very limited amount of work has been done by W.F.I. labor. It may be noted that of the 197,902 acres worked on national forest lands to date 103,380 acres were worked in Michigan, 46,192 acres in Minnesota and 48,330 acres in Wisconsin. The greatest amount of initial control work on the national forests was performed in 1934 when over 5,000,000 Bites were removed from 48,233 acres. The next largest acreage worked was in 1933 when 17,388 acres were cleared of over 1,269,000 Bites. In this connection it will be noted that in 1934 there were nearly five times as many Bites per acre pulled than in 1933. The reason for the decrease in the number of Bites in 1933 is that the acreage worked included a large amount of white pine planting site as well as planted white pine which was Bite-free or nearly so.

In Tables 24, 25 and 26 information is shown for Indian Service lands similar to that shown in Tables 22 and 23 for national forest lands. Cumulative initial work on Indian Service lands is shown in Table 24. Some of the best white pine in the Region is found on the Indian Reservations. It is also true that Bites are much more abundant on the Indian Service lands than on those of other ownerships. Over 24,000,000 Bites were removed from 73,184 acres initially worked on Indian Service lands. Bites at the rate of 340 per acre were removed initially from Indian Service lands as contrasted with Bites at the rate of 70 per acre removed initially from national forest lands. Of the 73,184 acres worked initially on Indian Service lands in Minnesota and Wisconsin, 26,757 acres were worked in Minnesota and 46,427 in Wisconsin. The largest amount of work done on any one Indian Reservation was on the Menominee Indian Reservation in Wisconsin, where over 8,500,000 Bites were removed from 25,362 acres initially. From the Red Lake Indian Reservation, Minnesota, over 6,000,000 Bites were removed from 13,365 acres initially.

A considerable amount of second eradication has also been performed on Indian Service lands as shown in Table 25. Of the 73,184 acres worked initially in the Region, 27,155 acres have been given second eradication.

One of the third eradication work done in this Region was on the Menominee Indian Reservation in Wisconsin. Control work initially started on this reservation in 1921 and third eradication was performed in 1936 and 1938 on some of the early workings as may be seen in Table 26.

In Tables 27 to 34, inclusive, are shown statements of insect control, both initial and re-eradication, by years for each state, and for the Region as a whole. The information in Table 34 is shown in Chart 3 graphically. This chart shows the acreage worked each year and cumulatively. It brings out graphically the fact that emphasis continues to be placed on initial eradication and that a considerable amount of second eradication is in order within the next few years on the large amount of initial acreage covered in the years 1933 to the present time.

Checking

The usual method of determining the completeness of Ribes eradication; viz., the 2% systematic check, as used in this Region since 1931, continued in effect in 1938. A discussion of this method may be found in the 1937 Annual Report.

In Table 35 there is shown by states results of checking after Ribes eradication in 1938. It will be noted that 222,940 acres were checked by counting Ribes on a total of 5,407 strip acres. This amounted to a 2.4% check. Incidentally since each check strip acre is 50 chains long and $1/5$ of a chain wide it follows that the 5,407 acres in check represent nearly 3,300 miles of strip.

The average feet of live stem found after eradication amounted to approximately four feet of live stem per acre. The average on lowland crew work was 12.3 P.L.S., on upland crew work 7.1 P.L.S., and on scout work 1.1 P.L.S.

The material in Table 35 is shown in Table 35A by states as a percent of acres worked and checked falling in each Ribes per acre class. It is gratifying to note that for the Region as a whole 99.8% of the total 222,940 acres had less than 25 P.L.S. per acre after working. Nearly three-fourths of the acreage worked showed less than five P.L.S. per acre and 93% showed less than 15 P.L.S. per acre.

In Table 35B the material in Table 35 is shown as a percentage of acres worked in each P.L.S. class by eradication type. In this table note that 92.5% of the acres worked by lowland crew, 96.8% by upland crew and 99.7% by scout showed less than 25 P.L.S. per acre after eradication.

Nursery Sanitation

During the spring of 1938, 43 nurseries were either worked for the first time or checked for Ribes within the 1,500 foot zone and for

Chart 3 - Initial Budget by Initial and
Second Round of Budgeting, 1995
and Third Round of Budgeting, 1995

Based on Table 10



Table 10: Which Stage of Budgeting was Performed

cultivated black current bushes within a mile. Due to a revision of Federal Quarantine 63 the responsibility of issuing permits for the shipment of white pine was shifted from the Division of Domestic Plant Quarantine to the Nursery Inspection Service in each state. Permission to ship white pine from all of the 43 nurseries worked in 1938 was granted by the state agency concerned.

A summary statement of nursery sanitation work performed in the North Central Region by ownership classes is shown following:

Summary of Nursery Sanitation Performed in
North Central Region, 1938

Ownership Class	Nurseries	Trees Protected	Trees Worked	Bushes Pulled	Man-Days Used
U.S.-F.S.	9	1406	3,763	23,833	1,049
D.S.-I.S.	1	7	280	11,609	80
D.S.-S.C.S.	5	86	1,563	363	25
State	12	348	3,878	45,235	751
Private	16	238	4,831	16,108	171
Total	43	1,085	14,315	97,148	2,056

The number of white pine growing in protected nurseries in 1938 classified according to state and ownership class is shown following:

Number of White Pine Growing in Nurseries
Protected in 1938, North Central Region

State	U.S.-F.S.	D.S.-I.S.	D.S.-S.C.S.	State	Private	Total
Illinois	-	-	-	-	19,600	19,600
Iowa	-	-	75,000	70,000	222,000	367,000
Michigan	15,632,400	-	-	1,398,000	69,000	17,099,400
Minnesota	6,990,956	302,000	1,228,000	3,323,159	272,000	12,116,115
Ohio	13,000	-	998,800	1,752,590	202,000	3,006,390
Wisconsin	2,750,250	-	1,500,000	15,900,000	1,095,000	19,605,250
Total	25,376,976	302,000	2,526,800	20,174,149	2,479,000	52,808,725

There were approximately 52,000,000 white pines in the protected nurseries to be used chiefly for reforestation purposes. In this Region mixed plantings of white pine and red pine are often made. If we assume that one-third of the white pines or approximately 17,000,000 is raised for planting, and will be equally mixed with red pine and planted approximately 500 to the acre there is sufficient white pine produced in this Region for the planting of 34,000 acres annually. Note that of the 52,000,000 white pines in the nursery over 45,000,000 are produced by the U. S. Forest Service and State.

Cultivated Black Current Elimination

Cultivated black current elimination work was carried on initially in Iowa, Michigan and Ohio and recheck work was done in Michigan and Wisconsin. The results of this work are given in Table 37. In initial work, a total of 14,947 bushes was found growing at 2,096 locations. Of these totals 12,635 bushes in 1,674 locations were destroyed. This work required the use of 6,039 man-days. On the average there were 9.23 locations of cultivated black current found per 1,000 inspections.

In recheck work, 3,305 bushes were found at 637 locations. Of these totals 3,286 bushes were destroyed at 632 locations. This required an expenditure of 6,625 man-days. On recheck work there were 4.00 locations of cultivated black current bushes per 1,000 inspections.

Initial work has been completed with the exception of cultivated black current initial work in those portions of Iowa where additional shelterbelt protection is contemplated, and within the mile zone of pine stands protected in states that have not put on a systematic public forest black current elimination campaign.

Recheck work in Michigan and Wisconsin is approaching completion. There remains a limited amount of recheck work to be done in Wisconsin, particularly in the vicinity of Duluth and the north where bushes were originally numerous. A limited amount of recheck work should be done in those counties in other states where such work is advisable.

In Table 37a there is shown an analysis of cultivated black current recheck work performed in Michigan and Wisconsin. It will be noted that in Michigan 96.8% of the total locations and in Wisconsin 91.3% were found originally. Of the 236 locations found in recheck in Michigan in 1938, 62.3% were missed originally 8.4% were replanted; 26.2% were sprouted; and 11.5% had been planted since the original survey. These percentages in Wisconsin were, respectively, 76.7%, 6.1%, 6.2%, 11.0%. There is a noticeable similarity in results in the two states analyzed on this basis, although the percent missed originally, and percent replanted are higher in Wisconsin and the percent of sprouts is higher in Michigan.

In Table 38 there is shown the cumulative summary of black current eradication in 1938. There were 272,114 cultivated black current bushes found at 32,261 locations. Of this total 262,590 bushes at 30,600 locations were destroyed. Classified as "holdouts" are 1,485 bushes growing at 228 locations. A "holdout" refers to an owner who refused to give up his cultivated black current bushes under any circumstances. It is remarkable that out of 32,261 locations found there are only 228, or approximately 0.7%, who are classified as "holdouts."

Canker Pruning

Canker-elimination as performed in 1957, was continued during 1958. This activity was restricted to such areas as parks, cemeteries and residences where each tree has considerable value and where the stand has been protected against blister rust. Cankers removed from such areas not only restore the attractiveness of the trees but also prolong their lives. Canker removal forestalls the possibility of misunderstanding on the part of the general public and the questioning of the effectiveness of control work. In Table 39 there is shown a statement of canker pruning done in 1958. In Table 40 this same information is shown cumulatively to December 31, 1958.

Field Studies

Milwaukee Office

Under the direction of Dr. Roney studies in the effectiveness of control in the Region were continued. Beginning July 1, 1958 it was possible to assign a full-time assistant, Mr. Glenn R. Allison, to assist Dr. Roney in this work. The results are being summarized in individual reports for each area and each type of study and will be available later. Statements of the work done on permanent plots under Dr. Roney's jurisdiction and the present status of each work are given in Tables 40A, 40B, 40C and 40D.

Infection Surveys

During the fall and winter of 1956 infection strip surveys were made in Upper Michigan and Minnesota to determine on a quantitative basis the amount of pine infection present on areas known to be infected. This information has not yet been fully analyzed. A statement of work done during 1958 in Michigan and Minnesota is shown in Table 41. It will be noted that 29,550 white pines were examined growing on 149,81 acres. A total of 370 trees or 1.2% was infected. A total of 444 cankers was destroyed from these infected trees. Infection was heavier in Upper Michigan where 9.07% of the trees were found infected compared with 0.28% in Minnesota. In considering these figures it must be explained that many of the areas examined had been eradicated of Pines several years previously which resulted in a decrease of the number of cankers found.

In Table 42 there is given a cumulative summary of infection survey work performed in Michigan and Minnesota during 1957 and 1958.

The significance in these general figures lies only in the fact that they represent conditions at the present time in the areas of infection examined. It is expected that this material will be further analyzed on the basis of 50-year eradication history.

Control Area Boundary Setting

The making of control area limits either by point or use of lat, as started in 1937, was continued in 1938. A description of this activity will be found in the 1937 Annual Report. During 1938, 1,662 miles of boundary were marked by the expenditure of 1,732 man-days or slightly less than one man-day per mile of boundary. Details of this work will be found in Table 43. In Table 44 the cumulative statement of this work is given. It will be noted that only from Michigan and Minnesota was this work reported.

Informational Activities

The success of a blister rust control program is dependent upon support on the part of the public, and particularly support from white pine owners. We are working on the control of a disease which for its success depends upon performing the work before blister rust has reached pine stands or before serious damage has occurred. Except in a relatively few places the damage caused by blister rust should be seen or demonstrated. In many respects blister rust control is similar to an insurance policy, in which the control work would correspond to the premium paid to insure a stand against damage from blister rust from youth to maturity. It is important that the general public understand the damage caused by blister rust and the effective and economic methods of its control.

During 1938 the usual methods of disseminating information on blister rust and its control were through the newspapers, radio and county fairs, talks and pictures before schools and other groups, and the distribution of literature primarily in connection with official black forest condition and other activities. Informational work done in each state is summarized briefly as follows:

Illinois

Blister rust literature and literature very distributed to white pine and blue owners in 26 counties and also to newspapers. Educational articles were published in a number of county newspapers. Blister rust posters and newspaper pictures were exhibited, all literature and literature were distributed at the International Forestry Show and the Illinois State Forestryman's Convention at Chicago.

Indiana

General blister rust literature was distributed to pine owners and others interested in control work. Soil Conservation Service employees were instructed as to the nature of control work.

Lower

The chief method of disseminating information on blister rust control work was in connection with contacting shelterbelt owners by foremen either of the control crews or survey crews.

Michigan

Educational work in various forms was conducted throughout the year. Newspaper articles were disseminated from the state office through the department's publicity man. Exhibits and window displays were shown at the fairs, O.C.O. camps and in store windows. Talks were given at schools. "Show-men" trips were conducted to pine infection areas. In addition the field men distributed hundreds of bulletins in their contacts with pine and shelterbelt owners.

Minnesota

Dissemination of information on blister rust control in Minnesota continued to be an important part of the control program. Newspaper articles were extensively published. During 1938 there were 34 articles totaling 279 column inches printed in newspapers. In addition there was a release made by the Conservation Department to 120 weekly papers concerning blister rust control area regulations.

During 1938, 22 window displays were placed. Comparatively few fair demonstrations were made. This activity was confined to three county fairs and the state fair. During the year 10 talks were given of which seven were to 4-H Club groups.

Ohio

The state leader gave an hour talk on blister rust control work to 325 students in the freshman biology class at Kent State University. A talk was given at a State 4-H Club meeting. Moving pictures of tree planting and shelterbelt construction were shown at two O.C.O. camps. A blister rust exhibit was placed at the Ohio State Fair at Columbus. Approximately 5,000 bulletins were distributed during the year.

Wisconsin

In 1938 information on blister rust and its control was disseminated through the following agencies:

1. Direct contact with pine owners.
2. Trips to pine infection plots.
3. County and State fair displays.
4. News articles in local papers.
5. Talks to various groups.
6. Window and outdoor displays.
7. Distribution of State and Federal bulletins and State blotters.

8. Posters placed in public places.
9. Motion pictures taken in Wisconsin which show blister rust damage to unprotected pine, how white pine areas are surveyed, and how ribbon eradication work is conducted.

Costs

Cost figures for the entire blister rust control program in the Region are shown in Tables 45 to 48, inclusive. In Tables 45 and 50 are given the figures for W.P.A. expenditures, project and administrative, respectively.

In Table 46 note that total Regional expenditures from all sources amounted to \$494,933.48. In 1937 the total Regional expenditures were \$568,572.94. Chart 4 based on Table 46 shows the percentage of total expenditures used in each state. The three Lake States spent 79.8% of the total.

In Table 47 there is shown by states the total Regional expenditures according to activity. This material is shown graphically in Chart 5. Note that 23.9% was used in general supervision which includes the Milwaukee Regional Office and the state and district offices. Local control, including ribbon eradication and pre-eradication survey used 56.8%. General control including cultivated black current elimination, nursery sanitation and canker pruning accounted for 14.5% and field data including Dr. Honey's work and infection surveys was charged with 4.8%. In comparing this chart with a similar chart for the work done in 1937 it is interesting to note that the percent spent on local control in 1938 was 56.8% and 50.6% in 1937 - an increase of 6.2%. This difference is still more striking when the percent spent on ribbon eradication in the two years is compared. In 1937, \$230,970.70, or 40.6%, were spent on ribbon eradication, while in 1938, \$280,075.81, or 56.7%, were spent on ribbon eradication. In 1937 on pre-eradication survey there were spent \$57,065.82, or 10.0%, while in 1938 only \$20,418.53, or 4.1%, were used for this purpose.

In Chart 5, which is based on Table 46, there is shown graphically the percentage of the total funds contributed by each agency. Four major sources of funds contributed the following percentages to the control program:

State and Private	9.9%
Federal Regular	7.3%
Emergency Relief	43.6%
C.C.R.	19.2%

If this chart is compared with that shown in the 1937 Annual Report it will be seen that the percentages are quite similar. In

breaking down the emergency relief funds into the Federal W.P.A. and other W.P.A. programs it will be noted that a much lower percent of State W.P.A., 2.4%, was used in 1938 than in 1937 when it amounted to 8.2%.

Chart 7 is also based on Table 46. In this bar chart the percentage of each of the four major sources of funds used in each state is shown. Illinois with 33.7% contributed from state and private sources led in the percentage of state contribution. Minnesota with 5.8% of state and private contributions showed the lowest percent of state participation. In this chart the expenditures in the Milwaukee office largely on Regular and W.P.A. funds, have not been projected to the states. If these expenditures had been projected the percentages for Federal Regular and W.P.A. funds in each of the states would have been slightly higher.

In Chart 8, based on Table 47 the percent of expenditures charged to each activity in each state is shown graphically. This chart is intended to give a summary picture of how the funds were used in each state. A relatively high proportion of the funds were spent on Rides eradication in all of the states. The lowest percent spent on Rides eradication was in Ohio. In this state a relatively high percentage, 26.7%, was spent on cultivated black currant eliminations. It will be noted that the percent spent on general supervision is fairly constant in all of the states.

In Table 48 there is shown by states the total expenditures classified into wages and other than wages. For the Region as a whole 66.3% of the total was spent as wages and 33.7% as other than wages. The percent spent on wages, exclusive of the Milwaukee office, was quite constant in all of the states. It varied from 61.7% in Iowa to 92.1% in Indiana.

In Table 49 the project W.P.A. expenditures used in the region in 1938 from the different appropriations are partially analyzed. A total of 4,541.7 man-months was employed costing \$233,980.52. The average over-all man-month cost was \$51.69. Of this total \$53.95 were wages and \$5.56 were other than wages. With the exception of Ohio and Iowa the operating cost per man-month was less than \$7.00 in every state. It was lowest in Illinois, \$4.04, and highest in Ohio \$8.42. The operating man-month cost was low in Illinois because the State leader traveled on state expense. It was high in Ohio because the number of man-months employed, 273.7 was relatively low and a great deal of travel was necessary due to the fact that the pine stands are scattered over the state. For the same reason the operating cost in Iowa, \$7.99, was high.

The over-all man-month cost varied from \$55.04 in Illinois to \$66.97 in Indiana. Work in Indiana was done in high rate counties which accounted for the greater cost. The over-all man-month cost in Wisconsin, including Milwaukee, \$57.88, was higher than it would otherwise have been because of the Milwaukee office. Exclusive of the Milwaukee office

the average over-all man-month cost in Wisconsin was \$54.01 and the operating cost was \$5.31.

The Milwaukee office operated partially on administrative funds from four appropriations in the total amount of \$5,156.41. Under these administrative funds 34.7 man-months were employed. A relatively high proportion of these funds was necessarily spent in the Regional Office on non-salary items since travel outside the state of Wisconsin had to be done on these funds. This information is given in Table 50.

Omnibus Tables

In Tables I and II are given summaries on Ribes eradication in 1938 by workings and programs, respectively. In Tables IA and IIA the same information is furnished on a cumulative basis for the years 1918 to 1938, inclusive. In Table III there are shown summaries of work done in 1938 other than Ribes eradication, including cultivated black current eradication, nursery sanitation, pre-eradication survey and canker pruning. This information is shown cumulatively in Table IIIA. In Table IV there is given a summary of costs in 1938 by programs and activities. In Table IVA are shown summaries of total expenditures in the Region from 1918 to 1938, inclusive, by programs and by activities.

The information furnished in these omnibus tables is intended to be in complete agreement with figures given in the 1938 Annual Report. In a few instances the information furnished in these omnibus tables will differ slightly from similar tables prepared in January 1939. The differences are not great and it was thought best to correct the omnibus tables so the information would check in every detail with that furnished in the Annual Report.

Table 5. - Compensation Cases Involving N.P.A. Workers
Reported to the Milwaukee Office, 1930.

State or Location	Poison by Oak	Eye Inj.	Cuts and Wounds	Fracture	Scalds	Infection	Total San- centhe	Number per 1000
Illinois	-	-	-	-	2	-	2	20.10
Indiana	-	-	-	-	-	-	-	-
Iowa	1	1	1	-	-	1	5	13.10
Michigan	7	3	5	1	1	2	11	16.10
Minnesota	1	1	-	-	-	1	3	4.22
Ohio	-	-	-	-	-	-	-	-
Wisconsin	1	1	2	1	1	1	17	12.25
Illwaukee	-	-	-	-	1	-	1	10.51

Table 5a. - Compensation Cases Involving M.P.A. Workers
Reported to the Milwaukee Office, 1938.

Month of Occurrence	Poison by or Cuts and Injury	Eye Wounds	Fracture	Sprain	Infection	Total	Number per 1000 Man-months
January	-	-	1	-	-	1	3.95
February	-	-	2	-	-	2	3.97
March	-	-	-	-	-	-	-
April	1	-	-	-	-	1	2.90
May	7	1	1	-	1	10	17.09
June	6	1	-	1	1	12	18.52
July	2	3	1	4	-	10	16.66
August	1	-	1	1	2	5	7.58
September	2	2	-	-	2	6	9.60
October	-	1	2	1	1	5	17.56
November	-	2	-	-	-	2	7.53
December	-	-	-	-	-	-	-
Total	20	7	5	7	7	56	10.00

Table 6. - Cumulative Propagation Survey Work on Native and Planted White Pine and Approved Planting Sites, North Central Region to December 31, 1970.

State	Total Acres		Acres Native White Pine North Protection		Acres Planted		Acres Approved	
	Native	White Pine	Total		White Pine		W. P. Planting Sites	
			White Pine	To Work	White Pine	To Work	Total	To Work
Illinois	200	200	200	200	200	1,500	1,500	1,500
Indiana	202	202	202	202	202	1,500	1,500	1,500
Iowa	1,000	500	500	500	500	10,250	10,250	10,250
Michigan	305,235	505,215	505,215	505,215	505,215	10,500	10,500	10,500
Minnesota	707,900	25,151	25,151	25,151	25,151	10,500	10,500	10,500
Ohio	4,705	1,005	1,005	1,005	1,005	10,500	10,500	10,500
Wisconsin	1,392,111	1,212,207	1,212,207	1,212,207	1,212,207	10,500	10,500	10,500
Total	2,607,153	1,945,180	1,945,180	1,945,180	1,945,180	10,500	10,500	10,500

Table 11. - Summary of Third Branches, by State and Agencies, North Central Region, 1956.

State	Agency	No. Areas	Acre White Pine Protected			Acre Worked			Man-days Labor			Man-days Supervision			Costs		
			Native	Planted	Pl. Site	Crew	Scout	Total	Crew	Scout	Total	Crew	Scout	Total	Labor	Supervision	Other
Michigan	W.P.A.	2	503	-	-	948	305	1,253	26	2	28	1,054.61	2117.60	110.71	1,173.32		
Wisconsin	IS-CCC	1	352	-	-	304	271	575	7	5	12	1,000.70	22.00	24.25	1,173.32		
Region total		3	855	-	-	1,252	576	1,828	33	7	40	2,055.31	2139.60	134.96	2,349.87		

Table 12. - Summary of Mop-up Branches, by State and Agencies, North Central Region, 1956.

State	Agency	No. Areas	Acre Worked			Man-days Labor			Man-days Supervision			Costs			
			Crew	Scout	Total	Crew	Scout	Total	Crew	Scout	Total	Labor	Supervision	Other	Total
Mop-up Areas															
First Branches															
Illinois	W.P.A.	1	-	-	-	1	-	1	-	-	1	77.12	24.34	15.43	116.89
Iowa	W.P.A.	1	-	-	-	1	-	1	-	-	-	30.25	-	21.20	106.75
Michigan	W.P.A.	1	-	-	-	1	-	1	20	-	20	77.12	41.20	15.43	213.85
Minnesota	IS-CCC	2	100	411	510	1	-	1	-	-	2	155.00	19.75	33.00	207.75
	IS-CCC	1	107	-	107	20	-	20	-	-	23	156.00	121.00	75.79	352.79
	State total	3	207	411	618	22	-	22	20	-	22	311.12	140.75	144.42	596.29
Second Branches															
Wisconsin	FS-CCC	5	101	30	131	12	-	12	1	-	1	10.63	32.14	25.06	137.83
	IS-CCC	1	36	30	66	1	-	1	1	-	1	11.16	5.00	4.25	16.41
	State	1	47	150	197	13	-	13	2	-	2	21.79	37.14	29.31	88.24
	W.P.A.	1	105	30	135	12	-	12	1	-	1	107.00	12.50	30.14	149.64
	State total	8	289	240	529	38	-	38	5	-	5	250.58	81.78	88.70	421.06
Region															
	FS-CCC	5	200	451	651	107	-	107	12	-	12	215.76	98.20	50.53	364.49
	IS-CCC	2	143	30	173	23	-	23	-	-	23	167.10	124.00	30.04	321.14
	State	1	47	150	197	13	-	13	2	-	2	119.25	16.12	29.31	164.68
	W.P.A.	50	105	30	135	12	-	12	3	-	3	1,066.82	141.44	96.15	1,304.41
Region total		58	495	661	1,156	155	-	155	28	-	28	2,469.93	379.76	206.03	3,055.72
Mop-up Areas															
Second Branches															
Michigan	W.P.A.	1	-	-	-	1	-	1	-	-	3	135.10	14.70	1.20	151.00
Minnesota	IS-CCC	1	250	10	260	10	-	10	17	-	17	1,140.37	97.22	111.10	1,348.69
Region total		2	250	10	260	11	-	11	20	-	20	1,275.47	111.92	112.30	1,500.69
Summary															
Grand total		60	1,113	609	1,722	1,570	-	1,570	58	-	58	3,200.45	591.68	318.33	4,110.46

Table 21. - Acres of Control Area Initially Cleared of Bites Covered by Pre-surveying Surveys
and Bites Worked not Surveyed. Cumulative by State, North Central Region, 1915-1930.

State	Acres in Control Area			Acres Surveyed by		Acres Neither Cleared of Bites nor Surveyed
	Native Pine	Planted Pine	Planting Bites	Cleared Initially Cleared of Bites	Pre-survey but not yet Cleared of Bites	
Illinois	561	5,351	7,952	13,510	9,965	3,546
Indiana	1,617	50,312	4,653	44,612	41,811	320
Iowa	4,115	645,085	48,000	590,000	300,000	580,000
Michigan	1,612,025	69,987	55,017	1,718,049	95,655	175,757
Minnesota	594,706	29,315	51,161	646,215	153,323	82,590
Other	37,500	139,247	17,372	192,117	60,116	57,205
Missouri	1,011,615	10,000	27,110	1,037,665	77,617	161,080
Total						

Table 27. - Summary of Canal Control in Illinois by Years, 1928-1948.

Year	Acres W.F.P.S. Project.	Acres worked	Miles Pulled	Man-days Labor		Total all Cost	Average per acre days	Cost dikes	Miles Monitored	Filled per Monday
				First	Second					
1928	265	1,998	302,660	Initial Production		11,571.24	0.11	80.54	104	712
1933	Worked		7,600	58		91.29				888
1934	1,129	3,117	392,114	1,505		2,818.64	0.12	0.90	125	290
1935	Worked		30,340	168		253.92				132
1936	76	778	21,222	579		1,330.71	0.24	3.71	61	206
1937	65	530	17,910	135		665.36	0.23	0.77	22	792
1938	912	3,523	570,892	1,297		4,537.34	0.35	1.23	162	740
Total	3,771	9,866	1,549,724	3,607		12,330.57	0.32	1.29	111	150
1936	627	1,123	232,343	Second Production		2,287.06	0.53	7.04	198	74
1937	365	1,003	126,025	810		2,007.20	0.80	1.79	195	155
1938	215	1,674	19,545	185		603.65	2.71	5.36	30	24
Total	1,207	3,800	368,913	1,700		4,920.91	0.18	1.29	105	24
Grand Total	4,011	13,771	1,718,637	Total All Productions		15,749.11	0.20	1.15	196	44

Table 30. - Summary of Local Control in Montana by Years, 1919-1938.

Year	Acres N.E. and Fl. Sites Protected	Acres Worked	Ribas Pulled	U.D. Labor and Super.	Total Cost	Av. per Acre Worked U.D.	Ribas Pulled	Acres Pulled per Man-day
Initial Eradication								
1928	107	1,500	83,051	259	\$729.32	0.18	40.19	110
1929	123	2,570	171,373	1,093	5,607.65	0.15	1.10	161
1930	1,795	6,578	373,156	2,731	5,161.94	0.11	0.79	157
1931	5,410	12,252	535,997	2,307	1,759.52	0.19	0.36	230
1932	5,364	16,871	1,164,305	3,662	6,952.86	0.32	0.11	320
1933	20,211	49,002	3,513,352	11,211	20,536.23	0.25	0.12	315
1934	72,922	194,831	12,531,032	50,484	97,621.10	0.26	0.51	219
1935	75,958	186,181	12,815,127	68,066	144,015.27	0.36	0.77	189
1936	74,566	212,732	18,220,159	94,372	106,657.99	0.22	0.77	335
1937	30,294	101,077	4,015,040	18,573	65,063.73	0.18	0.64	217
1938	48,180	144,661	2,621,223	17,302	57,701.84	0.12	0.10	152
Grand Total	15,522	75,653	43,150,114	210,005	\$500,889.41	0.21	0.62	301
Second Eradication								
1929	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-
1932	203	420	6,004	18	\$13.35	0.01	0.32	103
1933	618	1,351	615	42	72.95	0.03	0.05	15
1934	2,597	6,402	110,051	1,209	1,991.97	0.19	0.30	113
1935	2,409	7,095	221,014	3,450	7,940.61	0.47	0.33	180
1936	2,464	7,095	1,422,138	5,093	15,107.77	0.25	0.72	202
1937	7,750	19,550	1,055,032	1,147	2,343.30	0.16	0.64	157
1938	10,573	13,305	629,553	1,117	13,012.50	0.18	0.57	140
Grand Total	24,725	67,997	4,105,507	13,397	\$50,810.01	0.21	0.51	177
Third Eradication								
1930	507	1,402	17,110	205	\$3,125.12	0.21	0.77	110
1931	107	1,500	83,051	368	750.5	0.18	0.10	101
1932	1,023	2,570	171,373	1,093	7,607.65	0.13	0.10	161
1933	1,795	6,578	373,156	2,731	5,161.94	0.15	0.79	157
1934	5,410	12,252	535,997	2,307	1,759.52	0.19	0.36	230
1935	5,364	16,871	1,164,305	3,662	6,952.86	0.32	0.11	320
1936	20,211	49,002	3,513,352	11,211	20,536.23	0.25	0.12	315
1937	72,922	194,831	12,531,032	50,484	97,621.10	0.26	0.51	219
1938	75,958	186,181	12,815,127	68,066	144,015.27	0.36	0.77	189
Grand Total	107,327	257,072	19,539,347	101,226	\$106,657.99	0.22	0.77	335

Table 34. - Summary of Local Control by Years, 1917 - 1938. (Continued.)
North Central Region.

Year	Acres W.P.A. and N.P.A.S. Protected	Acres Worked	Roses Pulled	Man-days and Supers	Total Cost	Per Acre Worked		Roses Pulled per Man-day	Average Cost per Man-day
						Man- days	Costs		
Initial Seedling									
1917	-	957	5,000	600	\$1,007.26	0.63	1.05	5.2	\$1.58
1918	400	1,200	90,000	700	1,000.00	0.58	2.50	75.0	4.29
1919	700	2,440	156,304	930	5,566.66	0.36	2.29	64.1	6.02
1920	1,049	11,739	900,335	3,534	10,097.42	0.30	0.86	76.7	2.87
1921	611	9,476	496,866	2,805	3,171.70	0.30	0.33	52.4	1.13
1922	404	4,045	531,042	711	3,504.51	0.15	0.62	109.3	4.60
1923	251	3,347	201,013	1,022	2,068.27	0.31	0.62	199.7	2.02
1926	-	208	5,240	55	-	0.30	-	83.2	-
1927	-	250	42,226	76	1,080.00	0.30	1.35	165.9	5.12
1928	107	1,835	160,536	370	1,530.60	0.80	0.89	67.5	4.41
1929	423	2,750	190,117	1,114	4,581.85	0.41	1.39	170.6	5.41
1930	3,240	6,957	577,595	3,073	6,803.20	0.34	0.76	187.9	2.21
1931	5,912	15,581	836,847	3,295	6,053.90	0.21	0.40	254.4	2.00
1932	9,387	38,638	2,821,605	6,006	11,050.57	0.19	0.38	144.7	8.15
1933	50,037	131,964	9,225,772	36,537	88,179.12	0.26	0.57	253.3	2.48
1934	145,863	476,535	39,013,341	140,103	401,453.08	0.29	0.85	278.4	2.89
1935	151,472	457,878	38,045,929	174,974	443,681.39	0.38	0.90	217.4	2.36
1936	153,425	629,127	54,170,573	171,963	545,758.08	0.27	0.95	315.0	3.41
1937	73,385	205,390	14,570,335	62,868	207,402.34	0.22	0.73	231.7	3.40
1938	105,808	605,518	15,621,190	65,123	201,752.12	0.15	0.50	299.9	3.41
Total	702,878	2,186,632	171,575,227	60,080	1,701,211.25	0.17	0.71	308.5	2.37
Second Seedling									
1938	203	1,200	8,000	18	12.35	0.04	0.12	15.1	2.74
1939	696	1,311	7,104	19	30.05	0.04	0.07	24.4	1.39
1934	6,446	19,008	1,051,096	4,728	15,623.07	0.26	0.83	221.4	3.16
1935	6,086	23,617	1,177,000	6,106	45,740.75	0.27	0.82	182.7	2.31
1936	22,158	58,777	3,071,191	16,73	43,408.42	0.25	0.77	175.5	2.42
1937	11,204	28,411	1,057,127	16,73	43,408.42	0.25	0.77	175.5	2.42
Total	71,262	218,729	10,460,425	70,000	1,701,211.25	0.17	0.71	308.5	2.37
Third Seedling									
1936	50	90	1,200	11	7.05	0.30	0.38	16.1	2.79
1938	789	8,068	113,584	121	8,241.17	0.10	1.01	271.3	2.67
Total	839	8,158	114,784	132	8,248.22	0.10	1.12	287.4	2.60
All Seedling									
1917	-	957	5,000	600	1,007.26	0.63	1.05	5.2	1.58
1918	400	1,200	90,000	700	1,000.00	0.58	2.50	75.0	4.29
1919	700	2,440	156,304	930	5,566.66	0.36	2.29	64.1	6.02
1920	1,049	11,739	900,335	3,514	10,097.42	0.30	0.86	76.7	2.87
1921	611	9,476	496,866	2,805	3,171.70	0.30	0.33	52.4	1.13
1922	406	4,845	531,042	716	3,504.51	0.15	0.62	109.3	4.60
1923	251	3,347	201,013	1,022	2,068.27	0.31	0.62	199.7	2.02
1926	-	208	5,240	55	-	0.30	-	83.2	-
1927	-	250	42,226	76	1,080.00	0.30	1.35	165.9	5.12
1928	107	1,835	160,536	370	1,530.60	0.80	0.89	67.5	4.41
1929	423	2,750	190,117	1,114	4,581.85	0.41	1.39	170.6	5.41
1930	3,240	6,957	577,595	3,073	6,803.20	0.34	0.76	187.9	2.21
1931	5,912	15,581	836,847	3,295	6,053.90	0.21	0.40	254.4	2.00
1932	9,387	39,058	2,829,609	6,821	11,693.92	0.17	0.38	144.7	8.15
1933	50,735	133,275	9,221,876	36,506	88,276.27	0.26	0.66	253.6	2.48
1934	152,009	494,569	40,071,110	141,893	419,176.29	0.29	0.85	276.7	2.90
1935	158,338	481,695	39,219,952	161,362	421,111.16	0.30	0.89	216.2	2.87
1936	175,683	624,954	56,746,758	185,031	289,336.75	0.27	0.92	305.7	3.37
1937	84,991	311,922	15,808,034	71,421	230,970.70	0.23	0.74	221.2	3.23
1938	131,273	475,437	16,700,121	84,255	260,875.61	0.18	0.55	376.5	3.67
Total	715,720	2,186,632	171,575,227	60,080	1,701,211.25	0.17	0.71	308.5	2.37

Section 1: General Information Section 2: Financial Summary

Section 1: General Information										Section 2: Financial Summary									
Project Details					Client Information					Revenue					Expenses				
Project ID	Project Name	Start Date	End Date	Status	Client Name	Client Address	Client Phone	Client Email	Project Manager	Revenue Type	Revenue Amount	Revenue Date	Revenue Period	Revenue Status	Expense Type	Expense Amount	Expense Date	Expense Period	Expense Status
001	Project Alpha	2023-01-01	2023-03-31	Completed	Client A	123 Main St	555-123-4567	info@clienta.com	John Doe	Service Fee	\$10,000	2023-03-31	Q1 2023	Final	Materials	\$2,000	2023-01-15	Q1 2023	Final
002	Project Beta	2023-04-01	2023-06-30	In Progress	Client B	456 Main St	555-234-5678	info@clientb.com	Jane Smith	Service Fee	\$15,000	2023-06-30	Q2 2023	Final	Materials	\$3,000	2023-04-15	Q2 2023	Final
003	Project Gamma	2023-07-01	2023-09-30	On Hold	Client C	789 Main St	555-345-6789	info@clientc.com	Mike Johnson	Service Fee	\$8,000	2023-09-30	Q3 2023	Final	Materials	\$1,500	2023-07-15	Q3 2023	Final
004	Project Delta	2023-10-01	2023-12-31	Planned	Client D	101 Main St	555-456-7890	info@clientd.com	Sarah Lee	Service Fee	\$12,000	2023-12-31	Q4 2023	Final	Materials	\$2,500	2023-10-15	Q4 2023	Final
005	Project Epsilon	2024-01-01	2024-03-31	Planned	Client E	202 Main St	555-567-8901	info@cliente.com	David Kim	Service Fee	\$9,000	2024-03-31	Q1 2024	Final	Materials	\$1,800	2024-01-15	Q1 2024	Final
006	Project Zeta	2024-04-01	2024-06-30	Planned	Client F	303 Main St	555-678-9012	info@clientf.com	Emily White	Service Fee	\$11,000	2024-06-30	Q2 2024	Final	Materials	\$2,200	2024-04-15	Q2 2024	Final
007	Project Eta	2024-07-01	2024-09-30	Planned	Client G	404 Main St	555-789-0123	info@clientg.com	Chris Brown	Service Fee	\$7,000	2024-09-30	Q3 2024	Final	Materials	\$1,400	2024-07-15	Q3 2024	Final
008	Project Theta	2024-10-01	2024-12-31	Planned	Client H	505 Main St	555-890-1234	info@clienth.com	Alex Green	Service Fee	\$13,000	2024-12-31	Q4 2024	Final	Materials	\$2,600	2024-10-15	Q4 2024	Final
009	Project Iota	2025-01-01	2025-03-31	Planned	Client I	606 Main St	555-901-2345	info@clienti.com	Olivia Black	Service Fee	\$6,000	2025-03-31	Q1 2025	Final	Materials	\$1,200	2025-01-15	Q1 2025	Final
010	Project Kappa	2025-04-01	2025-06-30	Planned	Client J	707 Main St	555-012-3456	info@clientj.com	Noah Grey	Service Fee	\$14,000	2025-06-30	Q2 2025	Final	Materials	\$2,800	2025-04-15	Q2 2025	Final
Total Revenue										\$100,000					\$20,000				
Total Expenses										\$20,000					\$20,000				
Net Profit										\$80,000					\$0				

Table 11. - Summary of Infection Survey Work Performed in North Central Region, 1948.

State	Miles of Lines to Number Strips Examined		Number Trees Infected	Percent of Trees Infected	Number Centers Found	Days Used	Costs		Total
	Strip	W. P.					Labor	Other	
Michigan	4,712	6,607	8,811	9.07	301	32	\$40,16	-	\$40,16
Minnesota	252,00	403,80	25,739	0.28	113	137	249,15	\$107.70	\$356.52
Total	256,712	410,407	34,550	1.12	414	169	\$289,31	\$107.70	\$397.01

Table 12. - Cumulative Summary of Infection Survey Work Performed in North Central Region, 1947-1950.

State	Miles of Lines to Number Strips Examined		Number Trees Infected	Percent of Trees Infected	Number Centers Found	Days Used	Costs		Total
	Strip	W. P.					Labor	Other	
Michigan	58,75	62,0	10,862	22.55	5,061	144	\$75,456	\$55.10	\$75,511
Minnesota	507,27	1,481,4	125,816	0.10	1,153	1,356	3,237,23	\$107.70	\$3,237,33
Total	566,02	1,543,4	136,678	1.32	6,214	1,500	\$3,312,69	\$162.80	\$3,312,89

Table 15 - Expenditures for All Blister Rust Control Work,
Milwaukee Office, 1958.

Agency	Expenditure Classification	Supervision	Field Costs	Total
Regular	Salaries	\$9,019.47	\$2,600.00	\$11,619.47
	Expenses	1,117.35	142.27	1,259.62
	Sub-total	10,136.82	2,742.27	12,879.09
701000	Salaries	2,000.00	"	2,000.00
W.P.A.	Expenses	1,002.07	305.23	1,307.30
	Sub-total	3,002.07	305.23	3,307.30
701002	Salaries	3,281.39	825.00	4,106.39
W.P.A.	Expenses	755.17	1,151.25	1,906.42
	Sub-total	4,036.56	2,000.00	6,036.56
501007	Salaries	75.00	"	75.00
W.P.A. Adm.	Expenses	"	"	"
	Sub-total	75.00	"	75.00
65-06/1959	Salaries	1,500.00	"	1,500.00
W.F.A. Adm.	Expenses	"	"	"
	Sub-total	1,500.00	"	1,500.00
701030(9)	Salaries	370.00	"	370.00
W.F.A. Adm.	Expenses	327.65	"	327.65
	Sub-total	697.65	"	697.65
701004(7)	Salaries	1,305.00	"	1,305.00
W.P.A. Adm.	Expenses	609.75	260.15	879.20
	Sub-total	1,914.75	260.15	2,174.90
701005(7)	Salaries	1,328.07	"	1,328.07
	Expenses	378.52	"	378.52
	Sub-total	1,706.59	"	1,706.59
451 Agriculture	Salaries	2,177.20	2,100.00	4,277.20
	Expenses	1,210.00	1,812.20	3,022.20
Grand Total		\$24,869.01	\$6,720.45	\$31,589.46

Table 4B. - Total North Central Regional Expenditures
Classified into Wages and
Other Than Wages, 1926.

State	Wages	Other Than Wages	Total	Percent Wages of Total
Illinois	87,007.51	41,270.58	128,278.09	68.7
Indiana	2,947.25	252.36	3,200.61	92.1
Iowa	19,033.49	6,263.98	25,297.47	81.7
Michigan	122,717.52	21,165.13	143,882.65	84.0
Minnesota	96,993.10	19,791.62	116,784.72	82.3
Ohio	31,011.39	6,117.61	37,129.00	87.5
Wisconsin	134,112.98	19,090.79	153,203.77	87.5
Milwaukee	28,650.00	6,035.07	34,685.07	79.5
Region Total	621,580.22	81,575.22	703,155.44	86.3

Table 2

1948-1949 (1948) (1949)

State	1948						1949						Total					
	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed
Illinois	3,533	170,420	44	1,397	1,472	101,465	100	1,397	170,420	44	1,472	101,465	1,400	170,420	44	1,472	101,465	1,400
Indiana	27,258	36,031	37	109	105	3,448	11	109	27,258	37	105	3,448	11	109	36,031	37	105	3,448
Iowa	19,409	102,999	3,461	2,137			1,109	102,999	3,461	2,137			1,109	102,999	3,461	2,137		
Michigan	110,061	2,508,700	14,134	17,301	23,305	265,110	3,304	17,301	110,061	14,134	23,305	265,110	3,304	17,301	2,508,700	14,134	23,305	265,110
Minnesota	58,151	6,077,140	14	13,891	18,805	108,004	10	13,891	58,151	14	108,004	10	13,891	6,077,140	14	108,004	10	13,891
Ohio	17,761	103,072		1,348	1,472	100,230	1,204	1,348	17,761		1,472	100,230	1,204	1,348	103,072		1,472	100,230
Wisconsin	109,415	6,674,063	1,320	21,028	21,420	102,700	1,000	21,028	109,415	1,320	21,420	102,700	1,000	21,028	6,674,063	1,320	21,420	102,700
Total	415,535	15,203,500	25,869	60,279	60,279	60,279	60,279	60,279	415,535	25,869	60,279	60,279	60,279	60,279	15,203,500	25,869	60,279	60,279

Table 3

Summary of 1948 Survey of Distribution of Spraying
(Excludes 1948 Survey of 1948) (1948) (1949)

State	1948						1949						Total					
	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed	Acres Worked	No. Pkts. Destroyed
Illinois	5,207	1,934	26,005	67	1,934	1,934	1,418	1,418	5,207	1,934	26,005	67	1,418	1,418	5,207	1,934	26,005	67
Indiana	27,361	9,096	391	3	1,000	1,000	1,000	1,000	27,361	9,096	391	3	1,000	1,000	27,361	9,096	391	3
Iowa	19,409			150	102,999	5,961	2,877	2,877	19,409			150	102,999	5,961	2,877			
Michigan	160,359	271	9,631	43	126	108,705	13,774	13,774	160,359	271	9,631	43	126	108,705	13,774	13,774	160,359	271
Minnesota	69,077	251	13,698	17	10,778	6,897,470	1,100	1,100	69,077	251	13,698	17	10,778	6,897,470	1,100	1,100	69,077	251
Ohio	24,843			17,887	100,676	2,500	5,000	5,000	24,843			17,887	100,676	2,500	5,000			
Wisconsin	133,119	5,199	215,132	107	1,163	81,747	10,000	10,000	133,119	5,199	215,132	107	1,163	81,747	10,000	10,000	133,119	5,199
Total	415,535	17,687	24,215	100	1,000	1,000	1,000	1,000	415,535	17,687	24,215	100	1,000	1,000	415,535	17,687	24,215	100
Percentage of Total Acres Worked	3.72			46.30			99.97		3.72			46.30			99.97			

Includes Soil Conservation Service and Agricultural Experiment Station Administration (1948-1949)

Table 14.

SUMMARY OF ALL RIBES ERADICATION 1910-1930 (Inclusive)

States	Total Acreage W. P.	Acreage North Protec- tion	Acreage Control Areas W. P. Plus Zones	1st Working				2nd Working				3rd Working				4th Working				Total Acreage Worked		Per Acre			
				Acreage Worked	No. Ribes Destroyed		Ac- tu- al Hr.	Acreage Worked	No. Ribes Destroyed		Ac- tu- al Hr.	Acreage Worked	No. Ribes Destroyed		Ac- tu- al Hr.	Acreage Worked	No. Ribes Destroyed		Ac- tu- al Hr.	1st Work.	2nd Work.	1st Work.	2nd Work.		
					Wild	Cult.			Wild	Cult.			Wild	Cult.			Wild	Cult.							
Ill.	3,100	2,968	13,910	9,966	1,334,356	363	3,000	3,325	308,055	48	1,706	-	-	-	-	13,771	1,732,411	406	5,513	71.6	27.4	133.2	104.6	0.33	0.45
Ind.	4,000	3,998	10,672	41,241	179,041	57	2,000	1,963	20,320	-	467	-	-	-	-	43,794	199,461	57	2,797	95.5	4.5	4.3	104.7	0.02	0.24
Iowa	6,000	5,600	598,000	300,390	2,606,071	35,682	19,500	3,200	15,183	153	308	-	-	-	-	306,130	2,701,259	36,035	13,477	98.2	1.7	5.0	2.9	0.06	0.43
Mich.	1,000,000	586,691	1,713,049	955,650	56,130,038	28,317	239,000	62,553	3,196,090	2,417	10,384	1,193	1,039,504	59,479,442	31,320	242,304	91.3	7.9	58.8	30.2	0.24	0.62			
Minn.	808,757	247,587	644,215	333,323	46,613,560	14,455	145,000	33,100	2,570,801	331	10,555	-	-	-	-	365,511	48,124,361	14,036	124,333	91.2	8.0	139.9	78.0	0.35	0.54
Ohio	10,624	11,503	192,117	66,316	1,227,283	-	10,000	10,521	329,328	-	5,097	-	-	-	-	76,637	1,556,071	-	22,356	46.6	15.5	16.3	31.5	0.23	0.55
Wis.	1,387,547	361,406	1,317,463	778,641	69,407,277	16,792	300,000	30,000	2,517,711	168	15,150	565	57,442	-	100	339,802	71,342,170	16,120	304,120	92.8	7.1	89.2	12.0	0.57	0.21
Total	3,220,628	1,219,753	11,623,355	2,146,831	177,577,626	95,491	3,000,000	5,175,153	4,197	33,195	2,198	111,736	95	3,521,545	68,745,635	109,101	730,500	92.6	7.3	71.3	15.5	0.27	0.21		

Table 14A.

SUMMARY OF ALL RIBES ERADICATION BY PROGRAMS 1915-1930 INCLUSIVE
(1st, 2nd and 3rd Workings)

States	Total Acreage Worked 1st, 2nd & 3rd	REGULAR AND COOPERATIVE				W.P.A. - S.R.A.				R.C.W.				F.S.A. or S.S.A.				Total Emergency Programs (W.P.A. - R.C.W. - F.S.A.)			
		Acreage Worked	No. Ribes Destroyed		Man-days Actual 8-Hour	Acreage Worked	No. Ribes Destroyed		Man-days Actual 8-Hour	Acreage Worked	No. Ribes Destroyed		Man-days Actual 8-Hour	Acreage Worked	No. Ribes Destroyed		Man-days Actual 8-Hour	Acreage Worked	No. Ribes Destroyed		Man-days Actual 8-Hour
			Wild	Cult.			Wild	Cult.			Wild	Cult.			Wild	Cult.			Wild	Cult.	
Ill.	13,771	3,993	256,005	-	1449	7,600	1,115,000	410	3,288	1,288	325,938	-	1,776	810	-	-	-	9,770	1,475,006	406	3,000
Ind.	43,794	9,996	391	-	6	21,342	117,800	-	1,472	9,745	75,039	57	1,230	2,713	6,823	-	89	33,798	199,470	57	2,000
Iowa	306,130	200	22,300	-	414	233,788	2,096,153	10,283	14,021	3,427	350,245	-	3,946	68,745	232,561	11,801	1,095	305,930	2,678,959	36,035	13,477
Mich.	1,039,504	56,136	2,785,925	43	11,987	489,732	35,090,033	31,732	122,668	489,504	23,290,356	145	113,312	4,092	303,126	-	907	983,363	56,689,347	31,377	239,000
Minn.	365,511	9,133	538,780	8	2,908	192,948	25,095,740	13,544	57,085	121,070	10,448,593	33	55,892	42,355	5,041,308	1,254	10,448	356,373	48,585,581	14,823	124,000
Ohio	76,637	390	3,129	-	56	42,316	693,073	-	10,302	22,539	528,133	-	10,305	11,392	132,236	-	1,693	76,247	1,553,742	-	22,356
Wis.	839,202	65,905	4,881,285	107	15,073	420,007	32,335,102	16,017	110,315	348,598	33,713,918	796	147,137	4,692	1,051,731	-	2,045	773,297	67,103,145	16,813	283,000
Total	2,684,549	145,753	6,486,615	150	30,335	1,477,610	51,717,300	15,787	316,751	695,209	75,732,442	1,051	335,543	150,769	3,767,591	13,063	16,278	2,538,791	177,218,030	107,126	695,000
Percentage of Total Acreage Worked		5.12				52.44				37.11				5.02				94.57			

a - Includes Soil Conservation Service & Agricultural Resettlement Administration with S.C.C.

TABLE I					
Year	1900	1901	1902	1903	1904
Jan	100.0	100.0	100.0	100.0	100.0
Feb	100.0	100.0	100.0	100.0	100.0
Mar	100.0	100.0	100.0	100.0	100.0
Apr	100.0	100.0	100.0	100.0	100.0
May	100.0	100.0	100.0	100.0	100.0
Jun	100.0	100.0	100.0	100.0	100.0
Jul	100.0	100.0	100.0	100.0	100.0
Aug	100.0	100.0	100.0	100.0	100.0
Sep	100.0	100.0	100.0	100.0	100.0
Oct	100.0	100.0	100.0	100.0	100.0
Nov	100.0	100.0	100.0	100.0	100.0
Dec	100.0	100.0	100.0	100.0	100.0

TABLE II					
Year	1900	1901	1902	1903	1904
Jan	100.0	100.0	100.0	100.0	100.0
Feb	100.0	100.0	100.0	100.0	100.0
Mar	100.0	100.0	100.0	100.0	100.0
Apr	100.0	100.0	100.0	100.0	100.0
May	100.0	100.0	100.0	100.0	100.0
Jun	100.0	100.0	100.0	100.0	100.0
Jul	100.0	100.0	100.0	100.0	100.0
Aug	100.0	100.0	100.0	100.0	100.0
Sep	100.0	100.0	100.0	100.0	100.0
Oct	100.0	100.0	100.0	100.0	100.0
Nov	100.0	100.0	100.0	100.0	100.0
Dec	100.0	100.0	100.0	100.0	100.0

Lyman

